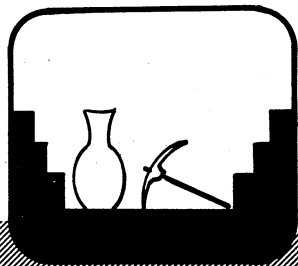
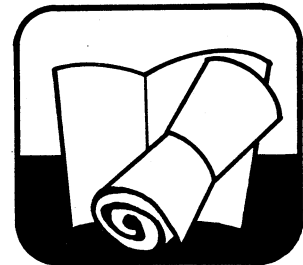
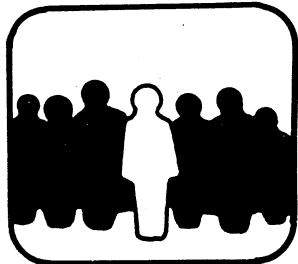
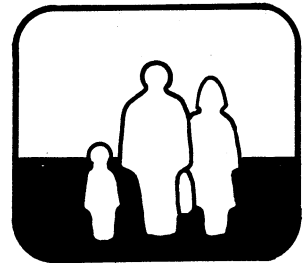
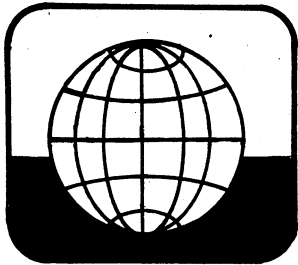


Advances in Consumer Research Volume XIV



Melanie Wallendorf
Paul Anderson
Editors

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Melanie Wallendorf and Paul F. Anderson, Editors

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ORDER FORMS ARE PROVIDED AT THE BACK OF THIS VOLUME

PREFACE

This volume contains papers that were presented at the seventeenth Annual Conference of the Association for Consumer Research, which was held October 16-19, 1986, at the Hilton-Harbour Castle Hotel in Toronto, Ontario, Canada.

The cover of this volume, like its contents, is meant to convey the image of a field characterized by co-existing and mutually-sustaining, diverse perspectives on consumer behavior. Rather than assuming the existence of a singular, external, verifiable reality which might dictate a singular approach to studying consumer behavior, we began with a desire to put together a conference which widely represented a variety of perspectives. In one sense, this is a safe approach--it guarantees that there will be something for everyone at the conference. On the other hand, this approach also insures that everyone will find something with which he or she disagrees. We hoped that the discomfort brought about by these disagreements would challenge each conference attendee to learn about different perspectives, and, perhaps, reconsider the ways in which one's own research perspective might broaden and change as a result. Russell Belk's Presidential Address and Everett Rogers' Fellow's Address served as appropriate bookends for this type of conference, both in their own ways calling for diversity of scholarship.

Of course, any conference chairs can only include in a conference those papers and sessions which are submitted. Thus, the contents of this volume are, in that sense, reflective of the diversity and depth of ACR. It is not a field with a unitary philosophical, substantive, or methodological paradigm. It is an exciting and growing field with considerable variety and diversity.

There are certain aspects of a conference which cannot be covered by a proceedings volume. Many of the presentations included visual materials such as slides and videos, and audio materials such as recorded and live music. These, along with the hallway interactions, taxi trips in Toronto, and dinner conversations remain as existential components of conference consumption which now exist (only) in ACR members' memories. But for many it is these experiences which comprise the intensity of a conference.

Yet a proceedings volume allows the text portion of the papers presented to endure, and to be read, pondered, and savored. It is for that purpose that we have edited this volume.

Our thanks are extended to all who contributed to this volume and to the experience of the conference.

Melanie Wallendorf and Paul Anderson, Editors
Univ. of Arizona Harvard Univ.

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1986-1987 Officers

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✦ PROGRAM ✦

1986
Association
for
Consumer Research
Annual Conference
October 16-19, 1986
Toronto Hilton-Harbour Castle
Toronto, Ontario, Canada

✦ THURSDAY, OCTOBER 16 ✦

9AM-4PM EXECUTIVE BOARD MEETING—Pier 3
3PM-7PM REGISTRATION—Foyer
6PM-8PM EARLY BIRD RECEPTION—Piers 4 & 5

CONCURRENT SESSIONS
8:30AM-10:00AM

- 1.1 *Special Session: Interpreting Qualitative Data*—Pier 5
Chair: **Dennis W. Rook**, University of Southern California
"Interpreting Material from the Field"
John F. Sherry, Northwestern University
"Interpreting Focus Group Data"
Bobby J. Calder, Northwestern University
"Interpreting Interviews with Projective Techniques"
Sidney J. Levy, Northwestern University
- 1.2 *Competitive Paper Session: Consumer Knowledge and Attribute Structures*—Pier 4
Chair: **Ann Beattie**, Columbia University
"A Simple Representation of the Contingent Structure of Knowledge"
John Deighton, Dartmouth College
"The Structural Characteristics of Consumers' Knowledge"
Beth Walker, The Pennsylvania State University
Richard Celsi, University of South Carolina
Jerry Olson, The Pennsylvania State University
"Measures of the Attribute Structure Underlying Product Typicality"
Barbara Loken, University of Minnesota
James Ward, University of Minnesota
Discussant: **Thomas J. Page, Jr.**, Michigan State University
- 1.3 *Special Session: Comparability and Product Class Competition: How Consumers Choose Between Apples and Oranges*—Pier 2
Chair: **Kim P. Corfman**, New York University
"Attribute Mapping: Determining the Relationship Between Concrete and Abstract Product Attributes"
Michael D. Johnson, University of Michigan
Claes Fornell, University of Michigan
"Defining the Comparability and Level of Competition of Consumer Products"
Kim P. Corfman, New York University
"Inferring Market Structures from Consumer Acquisition Patterns for Durables"
Russell S. Winer, Vanderbilt University
Discussant: **Donald H. Lehmann**, Columbia University
- 1.4 *Competitive Paper Session: Involvement*—Pier 7
Chair: **Jerry Conover**, Northern Arizona University
"Product Involvement: Testing the FCB Model"
Judy L. Zaichkowsky, Simon Fraser University
"The Zaichkowsky Personal Involvement Inventory: Modification & Extension"
Edward F. McQuarrie, Santa Clara University
Michael Munson, Santa Clara University

"A Framework for Relating Consumer Involvement to Lateral Brain Functioning"

Banwari Mittal, University of Buffalo
Discussant: **C.W. Park**, University of Pittsburgh

- 1.5 *Special Session: Cortical Perspectives in Consumer Research*—Pier 8

Chair: **Punam Anand**, New York University
"Lateral Asymmetry in the Formation of Preference Judgments"

Punam Anand, New York University
Morris Holbrook, Columbia University
Debra Stephens, University of Maryland

"Hemispherical Lateralization: The Relationship of Processing Orientation with Judgment and Recall Measures for Print Advertising"

Susan Heckler, Duke University
Terry Childers, University of Minnesota

"Gender Differences in Cortical Functioning"
Joan Meyers-Levy, UCLA

Discussant: **Michael Rothschild**, University of Wisconsin, Madison

- 1.6 *Special Session: High Technology Diffusion Research*—Pier 3

Co-chairs: **Hubert Gatignon**, University of Pennsylvania
Thomas S. Robertson, University of Pennsylvania

"Consumer Creativity and the Evaluation of New Technological Innovations"

Elizabeth Hirschman, New York University
"The Diffusion of High Technology"

John Kimberly, University of Pennsylvania
Laura Poppo, University of Pennsylvania

"Involvement in Innovation Processes: Perspectives of Key Constituencies"

Peter Wilton, Duke University
Dipankar Chakravarti, University of Arizona

"Technology Diffusion: A Propositional Test"
Thomas S. Robertson, University of Pennsylvania

Hubert Gatignon, University of Pennsylvania
Discussant: **Thomas S. Robertson**, University of Pennsylvania

COFFEE BREAK—Foyer
10:00AM-10:30AM

CONCURRENT SESSIONS
10:30AM-Noon

- 2.1 *Special Session: Ethnographic Research: An Interactionist/Naturalistic Approach to the Study of Consumer Behavior*—Pier 5
Chair: **Keith Warriner**, University of Waterloo
"Marketplace Dynamics: The P's of People and Process"
Robert Prus, University of Waterloo
Wendy Frisby, University of Waterloo
"Generic Social Processes: Implications of a Processual Theory of Action for Research on Marketplace Exchanges"

- Robert Prus**, University of Waterloo
"Consuming as Social Action: Ethnographic Methods in Consumer Research"
- Clinton Sanders**, University of Connecticut
"Prospects for the Study of Consumer Behavior"
- Jack Haas**, McMaster University
- 2.2 Competitive Paper Session: Visual and Verbal Information Processing—Pier 8**
 Chair: **April Atwood**, University of Washington
"Do the Parameters of Choice Models Depend on Differences in Stimulus Presentation: Visual Versus Verbal Presentation"
- Jordan J. Louviere**, University of Alberta
Herb Schroeder, North Central Forest Experiment Station
Cathy H. Louviere, Data Sciences Associates of North America
George G. Woodworth, University of Iowa
"Object Relations Theory: Male and Female Differences in Visual Information Processing"
- Keren Johnson**, The University of Texas at Austin
Linda Golden, The University of Texas at Austin
Mary Zimmer, The University of Texas at Austin
"Constructs and Measures of Individual Differences in Imagery Processing: A Review"
- Debbie MacInnis**, University of Arizona
 Discussant: **Terry L. Childers**, University of Minnesota
- 2.3 Special Session: Where No Consumer Researcher has Gone Before: New Research made Possible by Personal Computers—Pier 9**
 Chair: **Eric J. Johnson**, Carnegie-Mellon University
"Computer-Assisted Advertising Evaluation"
- Raymond R. Burke**, University of Pennsylvania
Wayne S. DeSarbo, University of Pennsylvania
"Monitoring Information Acquisition in Decision-Making: Experiences with MouseLab, a Computer-Based Process Tracing System"
- Eric J. Johnson**, Carnegie-Mellon University
John W. Payne, Duke University
James R. Bettman, Duke University
David A. Schkade, University of Texas
"Towards Consumer Decision Aid Systems"
- Meir Karlinsky**, Carnegie-Mellon University
- 2.4 Competitive Paper Session: Consumer Choice Behavior—Pier 3**
 Chair: **Michael Solomon**, New York University
"An Integrative Approach To Consumer Choice"
- T.C. Srinivasan**, Vanderbilt University
"Measuring Consumers' Inferential Processing In Choice"
- Sarah Gardial**, University of Tennessee
Gabriel Bichal, University of Houston—University Park
"The Impact of Information Load and Variability on Choice Accuracy"
- Michael Ursic**, Gonzaga University
Roger J. Best, University of Oregon
"Cognitive Differentiation Analysis: A New Methodology for Assessing the Validity of Means-End Hierarchies"
- Thomas J. Reynolds**, University of Texas at Dallas
W. Steven Perkins, University of Texas at Dallas
- 2.5 Special Session: Memory Effects on Choice: The Importance of Considering The Effects Of What Is Remembered On What Is Chosen—Pier 2**
 Chair: **John G. Lynch, Jr.**, University of North Carolina
"Schema-Based Planning of Events in Consumer Contexts"
- Lawrence W. Barsalou**, Emory University
J. Wesley Hutchinson, University of Florida
"Remembering and Then Choosing From the Consideration Set: The Implications of Brand Retrieval for Brand Choice"
- Prakash Nedungadi**, University of Toronto
"Knowledge of Interattribute Correlations in a Product Category: Effects on Consumer Choice Processes"
- Merrie Brucks**, University of North Carolina
Dipankar Chakravarti, University of Arizona
"Does Recall of Advertising Claims Predict Delayed Responses to the Advertised Brand?"

Amitava Chattopadhyay, McGill University
"Consumers' Use of Remembered Attribute Information and Prior Evaluations in "Fixed" Choice Tasks"

John G. Lynch, University of North Carolina
Howard Marmorstein, University of Florida

- 2.6 Special Session: Multidisciplinary Perspectives on Brand Loyalty—A Workshop—Pier 4**
 Chair: **Richard J. Lutz**, University of Florida

"Brand Loyalty as Attitude-Behavior Consistency"
Richard J. Lutz, University of Florida

"The Development of Brand Loyalty: A Cognitive Development Perspective"

Deborah Roedder John, University of Wisconsin—Madison

"Generalized Multiattribute Utility Models As Theories of Brand Loyalty"

Robert J. Meyer, UCLA

"A Behavioral Perspective on Brand Loyalty"

Michael L. Rothschild, University of Wisconsin—Madison

"Brand/Store Loyalty: One Retailer's View"

James J. Rys, Sears, Roebuck & Co.

"Cereal Monogamy: Brand Loyalty as Secular Ritual in Consumer Culture"

John F. Sherry, Jr., Northwestern University

"Loyalty to Services: Conceptual and Methodological Issues"

Valarie A. Zeithaml, Duke University

LUNCHEON—Ballroom
 Noon-1:45PM

Business Meeting

Chaired by **H. Keith Hunt**, Executive Secretary—
 Association for Consumer Research

Presidential Address

Russell Belk, University of Utah

CONCURRENT SESSIONS
 2:00PM-3:30PM

- 3.1 Special Session: Consumption Symbolism: A Comparative Perspective—Pier 5 ...**
 Chair: **John F. Sherry, Jr.**, Northwestern University

"May Your Life Be Marvelous"

John F. Sherry, Northwestern University

Eduardo G. Camargo, Northwestern University

"Advertising: Meaning or Information?"

Grant McCracken, University of Guelph

"Generating Status Symbols: You Are What You Own"

Penny Van Esterik, York University

"Houses as Consumer Goods: Views from California and Belize"

Richard Wilk, New Mexico State University

- 3.2 Special Session: Fanatic Consumer Behavior: Collectors, Cognoscenti, Compulsives, and Other Captives of Deeply Involved Consumption—Pier 2**

Chair: **Morris B. Holbrook**, Columbia University

"Conceptualizing Deep Involvement: A Framework for Fanatic Phenomena"

Peter Bloch, Louisiana State University

"The Statistician In the Bleachers"

Joel Steckel, Columbia University

"Breeding, Training, and Riding: The Serious Side of Horsing Around or Dressage for Success"

Debra Scammon, University of Utah

Susan Spiggle, University of Connecticut

"O, To Go Down to the Sea Again: Why I'd Rather Be Sailing"

Michael J. Ryan, University of Michigan

"Pumping Iron III: Confessions of a Super-Jock"

Donald R. Lehmann, Columbia University

"Obsessive-Compulsive Consumption and the Abuse of Credit"

Ron Faber, University of Texas, Austin

Thomas O'Guinn, University of Illinois

- "Bulimia, Anorexia, and Other Obsessions: Feasting, Fasting, and Food Fanaticism"*
Carole L. Christopher, University of British Columbia
- "Compulsive Collecting: Ambivalence in the Advertising Archives"*
Richard W. Pollay, University of British Columbia
- "It's the Thought that Counts: A Case Study of Christmas Compulsion"*
Carole L. Christopher, University of British Columbia
- Richard W. Pollay**, University of British Columbia
"An Audiovisual Inventory of Some Fanatic Consumer Behavior: The 25-Cent Tour of a Jazz Collector's Home"
- Morris B. Holbrook**, Columbia University
"How Do Cognitive Processes Differ by Level of Jazz Fanaticism?"
- Mark Gridley**, Mercyhurst College
- 3.3 Special Session: New Advances in Preference Assessment—Pier 3**
Chair: Joel Huber, Duke University
- "Computerized vs. Paper and Pencil Conjoint Methods: A Comparison Study"*
Carl Finkbeiner, National Analysts
- "The Usefulness of Accessing Unacceptable Alternative Levels in Conjoint Analysis"*
Noreen Klein, Virginia Tech
- "The Effectiveness of Various Forms of Adaptive Questioning in PC-Based Conjoint Analysis"*
Joel Huber, Duke University
- "Changes in the Commercial Uses of Conjoint Analysis in the Commercial Sector"*
Philippe Cattin, University of Connecticut
- Dick R. Wittink**, Cornell University
"A Concept Learning System (CLS) for Enhancing the Intelligence of Conjoint Analysis: Some Recent Extensions"
- Imram Currim**, UCLA
Robert Meyer, UCLA
- "Conjoint Analysis Reliability: Empirical Findings"*
David Reibstein, University of Pennsylvania
- John E.G. Bateson**, Stanford University
William Boulding, Duke University
- "Recent Developments in Consumer Choice Simulators"*
Paul E. Green, University of Pennsylvania
- Discussant: Jim Tunbusch**, Procter and Gamble
- 3.4 Competitive Paper Session: Advertising and Consumer Behavior—Pier 8**
Chair: Alan Sawyer, University of Florida
- "Referent Position in Comparative Advertising: A Pilot Study"*
Michael D. Johnson, University of Michigan
- David A. Horne**, University of Michigan
"The Effects of Framing and Advertising Sequencing on Attitude Consistency and Behavioral Intentions"
- Larry J. Marks**, Kent State University
Michael A. Kamins, University of Southern California
- "Effects of Variation in Message Execution on the Learning of Repeated Brand Information"*
Robert E. Burnkrant, The Ohio State University
- Hanumantha R. Unnava**, The Ohio State University
"Copy Testing, Thought Elicitation and Attitude Theory: Two's Company, Three's A Crowd!"
- Peter R. Dickson**, The Ohio State University
Paul L. Sauer, The Ohio State University
- 3.5 Special Session: The Framing of Consumer Choices—Pier 9**
Chair: Kent B. Monroe, Virginia Tech
- "Do Consumers' Reference Points Affect Their Buying Decisions?"*
Debra Rowe, University of Michigan
- Christopher P. Puto**, University of Michigan
"Influences of Consumer Preferences for Multiple Outcomes"
- William T. Ross**, Duke University
Itamar Simonson, Duke University
- "Framing Effects on Buyers' Subjective Product Evaluations"*
Kent B. Monroe, Virginia Tech
- Joseph D. Chapman**, Virginia Tech
- "The Story, The Frame and The Choice"*
James W. Gentry, Oklahoma State University
- Joshua L. Weinger**, Oklahoma State University
Melissa Burnett, Oklahoma State University
- "Reference Points in Consumer Decision Making"*
Noreen M. Klein, Virginia Tech
- Janet E. Oglethorpe**, Virginia Tech
Discussant: Eric J. Johnson, Carnegie-Mellon University
- 3.6 Special Session: Schemer Schema Revisited: A Look at the Marketplace Game—Pier 4**
Co-chairs: William Boulding, Duke University
Marian Burke, Duke University
Julie Edell, Duke University
- "Schemer Schema Theory: An Overview of Theory and Research on People's Assumptions About Persuasion and Marketing Tactics"*
Amna Kirmani, Stanford University
- Peter Wright**, Stanford University
"What Makes a Television Commercial Persuasive? The Consumer's Viewpoint"
- Julie Edell**, Duke University
Jim Bettman, Duke University
- "Advertising As a Signal: Its Impact on Consumer Inferences"*
William Boulding, Duke University
- Michael J. Moore**, Duke University
"Mass Advertising As Signals: The Issue of Multiple Constituencies"
- Marian Burke**, Duke University
Ron Goodstein, Duke University
-
- BREAK—Foyer
3:30PM–4:00PM
-
- CONCURRENT SESSIONS
4:00PM–5:30PM
-
- 4.1 Special Session: The Syntax of Consumption Rituals—Pier 5**
Chair: Trudy Kehret-Ward, University of California, Berkeley
- "Variations in Ritual Structure Over Time"*
Dennis Rook, University of Southern California
- "Gender and Situational Influences on Ritual Syntax"*
Trudy Kehret-Ward, University of California, Berkeley
- Anya Golden**, University of California, Berkeley
"Effects of Violating Ritual Syntax on Information Processing"
- Lisa Grossman**, McCann-Erickson, Inc.
Joseph Kraft, Morgan-Stanley
- Discussant: Rebecca Holman**, Young & Rubicam
- 4.2 Special Session: Fanatic Consumer Behavior: Collectors, Cognoscenti, Compulsives, and Other Captives of Deeply Involved Consumption—Pier 2 (Session Continued)**
Chair: Morris B. Holbrook, Columbia University
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 (Session Continued)
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William Boulding, Duke University
"Recent Developments in Consumer Choice Simulators"
Paul E. Green, University of Pennsylvania
 Discussant: **Jim Tunbusch**, Procter and Gamble
- 4.4 *Competitive Paper Session: Diffusion, Innovation Resistance and Social Networks—Pier 7*
 Chair: **Meryl Gardner**, New York University
"A Meta-Analysis of the Diffusion of Innovations Literature"
David Midgley, University of New South Wales
"A Model of Innovation Resistance"
S. Ram, University of Arizona
"A Word of Mouth Network"
Peter H. Reingen, Arizona State University
 Discussant: **Everett M. Rogers**, University of Southern California
- 4.5 *Special Session: The Framing of Consumer Choices—Pier 9*
 (Session Continued)
 Chair: **Kent B. Monroe**, Virginia Tech
"Do Consumers' Reference Points Affect Their Buying Decisions?"
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"Reference Points in Consumer Decision Making"
Noreen M. Klein, Virginia Tech
Janet E. Oglethorpe, Virginia Tech
 Discussant: **Eric J. Johnson**, Carnegie-Mellon University

- 4.6 *Competitive Paper Session: Consumer Satisfaction-Dissatisfaction, Complaint Behavior, and Boycotting—Pier 8*
 Chair: **Jacob Jacoby**, New York University
"An Investigation of the Interrelationship Between Consumer (Dis)Satisfaction & Complaint Reports"
Richard L. Oliver, University of Pennsylvania
"Complaint Behavior: Analysis By Demographic Lifestyle & Consumer Values"
Michella Morganosky, University of Illinois
Hilda M. Buckley, University of Illinois
"Differences in Organizational Responses to Consumer Letters of Satisfaction and Dissatisfaction"
Cathy J. Cobb, University of Illinois
Gary C. Walgren, Arthur Andersen & Co.
Mary Hollowed, University of Illinois
"The Application of An Expectancy Value Operationalization of Functional Theory to Examine the Attitudes of Boycotters and Nonboycotters"
George Belch, San Diego State University
Michael Belch, San Diego State University

SESSIONS END 5:30PM

COCKTAIL PARTY—Piers 4 & 5
 6:30PM-8:00PM

♣ SATURDAY, OCTOBER 18 ♣

MORNING COFFEE—Foyer
 8:00AM-8:30AM

REGISTRATION—Foyer
 8:00AM-4:00PM

CONCURRENT SESSIONS
 8:30AM-10:00AM

- 5.1 *Special Session: Film and Consumer Behavior: ACR Goes to the Movies—Pier 5*
 Chair: **Debra Stephens**, University of Maryland
"Film, Television, Culture, and Consumption"
Thomas O'Guinn, University of Illinois
"The Dramatic Side of Consumer Research: The Semiology of Consumption Symbolism in the Arts"
Morris Holbrook, Columbia University
"Emotional Responses to Advertising: The Importance of Stimulus Versus Viewer Control"
J. Edward Russo, Cornell University
Debra Stephens, University of Maryland
"A Preview of a Model on the Choice Process for Experimental Products"
L. Elizabeth Martin, Georgetown University
- 5.2 *Competitive Paper Session: Retail Consumer Behavior: Lists, Planning and Mood—Pier 3*
 Chair: **Stephen Hoch**, University of Chicago
"Grocery Store Shopping Lists: What Do Consumers Write?"
Susan Spiggle, University of Connecticut
"Deviations From a Shopping Plan: When and Why Do Consumers Not Buy Items as Planned?"
Easwar S. Iyer, University of Massachusetts
Sucheta S. Ahlawat, University of Massachusetts
"Mood States of Shoppers and Store Image: Promising Interactions and Possible Behavioral Effects"
Elaine Sherman, Hofstra University

- Ruth B. Smith**, University of Maryland
Discussant: Elizabeth C. Hirschman, New York University
- 5.3 *Special Session: Social Network Analysis and Organizational Buying Research: Issues and Directions—Pier 7*
Chair: Michael D. Hutt, Arizona State University
"Social Network Analysis: Implications for Organizational Buying Behavior Research"
Barry Wellman, University of Toronto
"The Buying Centers View: Long Live the Buying Center"
Julia Bristol, University of Michigan
Michael J. Ryan, University of Michigan
"Social Network Analysis: Emergent versus Prescribed Patterns in Organizational Buying Behavior"
Peter H. Reingen, Arizona State University
Michael D. Hunt, Arizona State University
- 5.4 *Special Session: Cigarettes and Regulation: Unintended Consequences?—Pier 8*
Chair: Gary T. Ford, The American University
"Cigarette Advertising, Health Information and Regulation Before 1970"
John Calfee, Federal Trade Commission
"A Content Analysis of Print Advertising for Cigarettes from 1920 to 1986"
Debra J. Ringold, The American University
"Unintended Outcomes from Self-Extinguishing Cigarettes"
John P. Brown, The American University
Gary T. Ford, The American University
- 5.5 *Competitive Paper Session: Children and Consumer Behavior—Pier 9*
Chair: Nermin Eyuboglu, Baruch College
"Do Mothers and Children Share Cereal and Beverage Preferences and Evaluative Criteria?"
Kenneth Bahn, Virginia Tech
"Children's Influence in Family Decisions and Consumer Socialization: A Reciprocal View"
K.M. Ekstrom, Washington State University
P.S. Tansuhaj, Washington State University
Ellen Foxman, Washington State University
"Children's Cognitive Responses To Advertising: The Role of Product Knowledge"
Carolyn Costley, University of North Carolina
Merrie Brucks, University of North Carolina
"The Effects of Question Form and Format on Children's Responses to TV Advertising"
M. Carole Macklin, University of Cincinnati
- 5.6 *Special Session: Consumer Processing Without Awareness—Pier 2*
Co-chairs: Esther Thorson, University of Wisconsin-Madison
Chris Allen, University of Cincinnati
"Current Status of Research on Subliminal Perception"
Philip M. Merikle, University of Waterloo
"An Investigation of the Causal Impact of Conscious Awareness in the Classical Conditioning of Preference"
Chris T. Allen, University of Cincinnati
Chris A. Janiszewski, Northwestern University
"Sub- and Supraliminal Conditioning of Affect to Brand Names"
Michael Donatello, University of Wisconsin-Madison
Esther Thorson, University of Wisconsin-Madison
"Effects of Supra vs. Subthreshold Picture Primes on Emotional Attributions About People on Television"
Byron Reeves, Stanford University
Frank Biocca, University of Wisconsin-Madison
Kurt Neuwirth, University of Wisconsin-Madison
Hayg Oshagan, University of Wisconsin-Madison
Zhongdang Pan, University of Wisconsin-Madison
Jef Richards, University of Wisconsin-Madison

COFFEE BREAK—Foyer
 10:00AM-10:30PM

CONCURRENT SESSIONS
 10:30AM-Noon

- 6.1 *Special Session: Exploring the Black Box: Some Socio-cultural Dimensions of Consumer Behavior—Pier 5*
Chair: Eric J. Arnould, University of Arizona
"Style, Affect, and the Diffusion of Innovations in Hausaphone Zinder, Niger Republic"
Eric J. Arnould, University of Arizona
"Household Consumption in an Ozark Mountain Farmstead Before the Great War"
Leslie Stewart-Abermathy, University of Arkansas
"Houses, Homes and Household Decisions in Belize and Northern California"
Richard Wilk, New Mexico State University
"Cultural Construction of Consumption Events: The Substitution of Wheat Bread for Barley Gruel in Highland Ecuador"
Mary Weismanthel, Beloit College
Discussant: Sidney Mintz, Johns Hopkins University
- 6.2 *Competitive Paper Session: Informational Efficiency, Social Efficiency and Informational Search in Consumer Markets—Pier 8*
Chair: Richard Yalch, University of Washington
"On Measuring the Informational Efficiency of Consumer Markets"
Brian T. Ratchford, State University of New York at Buffalo
Pola Gupta, State University of New York at Buffalo
"Toward Measurement of Consumer Market Efficiency"
John F. Gaski, University of Notre Dame
"A Path Analytic Model of External Search for Information for New Automobiles"
Narasimhan Srinivasan, University of Buffalo
Discussant: Ward Hanson, University of Chicago
- 6.3 *Special Session: Current Perspectives in Organizational Buying Behavior—Pier 7*
Chair: Daniel H. McQuiston, Indiana University
"Merging Adoption Process and Organizational Buying Models"
David T. Wilson, Pennsylvania State University
"Industrial Buying Behavior: Japan versus the U.S."
Wesley J. Johnston, University of Southern California
"Exploring Functional Role Evaluative Criteria in an Industrial Purchase Decision: A Research Agenda"
Daniel H. McQuiston, Indiana University
Rockney G. Walters, Indiana University
Discussant: Ajay Kohli, University of Texas, Austin
- 6.4 *Special Session: Consumer Research on Organ Donation—Pier 2*
Chair: James Shanteau, Kansas State University
"Psychological Factors Influencing Decisions to Donate Organs"
Pat McIntyre, Kansas State University
Richard Harris, Kansas State University
John Skowronski, Ohio State University
"The Role of Self- and Other-Oriented Motivation in the Organ Donation Decision"
Michael L. Klassen, Kansas State University
Mark A. Barnett, Kansas State University
Vera McMinimy, Kansas State University
Laurel Schwarz, Kansas State University
"Knowledge and Image of Body Organs: Impact on Willingness to Donate"
James Shanteau, Kansas State University
Grant Wilms, Kansas State University
Stephen Kiefer, Kansas State University
Discussants: David W. Stewart, University of Southern California
Vinod K. Thukral, Tulane University
- 6.5 *Competitive Paper Session: Consumption Experiences—Pier 3*
Chair: Betsy Gelb, University of Houston
"Towards a Deeper Understanding of Consumption Experiences: The Underlying Dimensions"
Fuat A. Firat, Appalachian State University
"Culture As Commodity: The Marketing of Cultural Objects and Cultural Experiences"
Robert F. Kelly, The University of British Columbia
"Media, Materialism, and Human Happiness"
Marsha L. Richins, Louisiana State University
Discussant: John F. Sherry, Jr., Northwestern University
- 6.6 *Special Session: Attitude Accessibility and Consumer Behavior—Pier 4*
Chair: Paul M. Herr, Indiana University

"Implications of a Process Model of Attitude Behavior Consistency for Consumer Behavior"
Paul M. Herr, Indiana University

"The Automatic Activation of Attitudes Toward Products"

David M. Sanbonmatsu, Indiana University

Russell H. Fazio, Indiana University

"Attitude Accessibility as a Moderator of the Attitude-Behavior Relation"

A. *"An Investigation of the 1984 Presidential Election"*

Russell H. Fazio, Indiana University

Carol Williams, Indiana University

B. *"An Investigation of Consumer Behavior"*

Russell H. Fazio, Indiana University

Martha C. Powell, Indiana University

"The Integrative Power of Attitude Accessibility for Explaining Attitude-Behavior Relations"

Ida E. Berger, University of Toronto

Andrew A. Mitchell, University of Toronto

Discussants: **Joseph W. Alba**, University of Florida

Clark Leavitt, Ogilvy Center for R&D

LUNCHEON—Ballroom
Noon-1:45PM

PRESENTATION OF FERBER AWARDS:
HAROLD H. KASSARJIAN, UCLA AND
JAMES R. BETTMAN, DUKE UNIVERSITY

HONORABLE MENTIONS:
KIM P. COREFMAN, NEW YORK UNIVERSITY
KEVIN L. KELLER, UNIVERSITY OF CALIFORNIA,
BERKELEY

PRESENTATION OF ACR FELLOW IN CONSUMER BEHAVIOR AWARD: **JOHN G. MYERS**, UNIVERSITY OF CALIFORNIA, BERKELEY
FELLOW'S ADDRESS:
EVERETT M. ROGERS, UNIVERSITY OF SOUTHERN CALIFORNIA, "THE CRITICAL SCHOOL AND CONSUMER RESEARCH"

CONCURRENT SESSIONS
2:00PM-3:30PM

- 7.1 *Special Session: How We Spent Our Summer Vacation: A Preliminary Report on Naturalistic Inquiry in the 1986 Consumer Behavior Odyssey—Pier 5*
Chair: **Harold Kassarjian**, University of California, Los Angeles
Russell Belk, University of Utah
Joseph Cote, Washington State University
Jeffrey Durgee, RPI
Morris Holbrook, Columbia University
Thomas O'Guinn, University of Illinois
Richard Pollay, University of British Columbia
John Sherry, Northwestern University
Melanie Wallendorf, University of Arizona
- 7.2 *Competitive Paper Session: Cooperation, Bargaining Behavior and Product Experience in Consumer and Organizational Buying—Pier 7*
Chair: **Michael Etzel**, University of Notre Dame
"A Social Influence Theory of Consumer Cooperation"
Cathy Goodwin, University of California, Berkeley
"He Says No, But Does He Really Mean It?: Bargaining Behavior, Cue Consistency and Attribution"
Randall L. Rose, The Ohio State University
Peter R. Dickson, The Ohio State University
"The Effects of Prior Product Experience on Organizational Buying Behavior"
Vicky L. Crittenden, Harvard University
Carol A. Scott, UCLA
Rowland T. Moriarty, Harvard University
Discussant: **Peter H. Reingen**, Arizona State University
- 7.3 *Special Session: The Pacific Rim: An Update—Pier 9*
Chair: **Francoise Simon-Miller**, Cresap, McCormick and Paget

"Stalking the Global Consumer: Myths and Facts from East and West"

George Fields, ASI Market Research

William Lazer, Florida Atlantic University

Francoise Simon-Miller, Cresap, McCormick and Paget

"The Japanese Working Wife: Spearhead for Change or Bastion of Tradition?"

Susan Douglas, New York University

"Advertising Creativity: East vs. West"

Paul Murphy, Dentsu-Young and Rubicam

Takashi Michioka, Dentsu-Young and Rubicam

"Ethnic Research in Consumer Behavior—An Individual Analysis Approach"

Chin Tiong Tan, University of Singapore

James McCullough, Washington State University

Jeannie Teoh, Washington State University

"Effective Market Potential Assessment—China and the Pacific Rim"

V.H. Kirpalani, Concordia University

7.4 *Special Session: The Effects of Metaphor in Advertising—Pier 8*

Chair: **Francoise Jaffe**, University of Michigan

"The Role of Metaphor in Consumer Processing of Marketing Messages"

Carol Pluzinski, University of Michigan

"Metaphors: An Uncounfounded Method for Inducing and Measuring the Impact of Mood on Evaluation"

Francoise Jaffe, University of Michigan

"Explaining the Effects of Sensing Is Evaluating

Metaphors: the Mediation of Vividness and Novelty"

Trudy Kehret-Ward, University of California-Berkeley

Taylor Hale Emerson, University of California-Berkeley

Discussant: **Rita Denny**, Needham-Harper Worldwide

7.5 *Special Session: Theoretical and Methodological Issues in Mood Research—Pier 2*

Chair: **Andrew A. Mitchell**, University of Toronto

"The Effect of Mood States on Cognition"

Alice M. Isen, University of Maryland

"Attitude and Effect"

Bobby J. Calder, Northwestern University

Charles L. Gruder, University of Illinois

"Mood Effects in an Advertising Context"

Andrew A. Mitchell, University of Toronto

"Memory, Mood and Consumer Judgment"

Thom Srull, University of Illinois

"Product Evaluation: Effects Of and On Consumer Mood States"

Meryl P. Gardner, New York University

Ronald P. Hill, New York University

7.6 *Competitive Paper Session: The Classical Conditioning Controversy: Competitive Paper & Workshop Discussion—Pier 3*

Chair: **Michael Mazis**, American University

"Comment on Classically Conditioning Human Consumers"

L.R. Kahle, University of Oregon

Sharon E. Beatty, University of Oregon

Pat Kennedy, University of Oregon

Discussants: **Gerald Gorn**, University of British Columbia

J. Paul Peter, University of Wisconsin

Thomas Madden, University of South Carolina

Chris Allen, University of Cincinnati

BREAK—Foyer
3:30PM-4:00PM

CONCURRENT SESSIONS
4:00PM-5:30PM

- 8.1 *Special Session: How We Spent Our Summer Vacation: A Preliminary Report on Naturalistic Inquiry in the 1986 Consumer Behavior Odyssey—Pier 5 (Session Continued)*
Chair: **Harold Kassarjian**, University of California, Los Angeles

Russell Belk, University of Utah
Joseph Cote, Washington State University
Jeffrey Durgee, RPI
Morris Holbrook, Columbia University
Thomas O'Guinn, University of Illinois
Richard Pollay, University of British Columbia
John Sherry, Northwestern University
Melanie Wallendorf, University of Arizona

- 8.2 *Special Session: Ferber Award Presentations—Pier 7*
Chairs: James Bettman, Duke University and
Harold Karsajian, UCLA

*"Models of Cooperative Group Decision Making and
Relative Influence: An Experimental Investigation
of Family Purchase Decisions"*

Kim P. Corfman, New York University
Donald R. Lehmann, Columbia University

*"Memory in Advertising: The Effect of Advertising
Memory Cues on Brand Evaluations"*

Kevin L. Keller, University of California, Berkeley

- 8.3 *Special Session: The Pacific Rim: An Update—Pier 9*
(Session Continued)

Chair: Francoise Simon-Miller, Cresap, McCormick
and Paget

*"Stalking the Global Consumer: Myths and Facts
from East and West"*

George Fields, ASI Market Research

William Lazer, Florida Atlantic University

Francoise Simon-Miller, Cresap, McCormick and Paget

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Takashi Michioka, Dentsu-Young and Rubicam

*"Ethnic Research in Consumer Behavior—An
Individual Analysis Approach"*

Chin Tiong Tan, University of Singapore

James McCullough, Washington State University

Jeannie Teoh, Washington State University

*"Effective Market Potential Assessment—China and
the Pacific Rim"*

V.H. Kirpalani, Concordia University

- 8.4 *Special Session: Researching Consumers to Stimulate
Creativity in Commercial Communication—Pier 3*

Chair: Rebecca H. Holman, Young & Rubicam, Inc.

Rebecca H. Holman, Young & Rubicam, Inc.

Lloyd Kirban, Burson-Marsteller, Inc.

Robert Passikoff, Cato-Johnson/Y&R

Susan Royer, Young & Rubicam—New York

- 8.5 *Special Session: Theoretical and Methodological
Issues in Mood Research—Pier 2*
(Session Continued)

Chair: Andrew A. Mitchell, University of Toronto

"The Effect of Mood States on Cognition"

Alice M. Isen, University of Maryland

"Attitude and Effect"

Bobby J. Calder, Northwestern University

Charles L. Gruder, University of Illinois

"Mood Effects in an Advertising Context"

Andrew A. Mitchell, University of Toronto

"Memory, Mood and Consumer Judgment"

Thom Srull, University of Illinois

*"Product Evaluation: Effects Of and On Consumer
Mood States"*

Meryl P. Gardner, New York University

Ronald P. Hill, New York University

- 8.6 *Competitive Paper Session: Consumer Behavior
Research with Marketing Implications I—Pier 8*

Chair: Kenneth Bahn, Virginia Tech

*"Self-Referencing Strategies in Marketing: What Can
Practitioners Learn from Academics?"*

Kathleen Debevec, University of Massachusetts

Harlan E. Spotts, University of Massachusetts

*"A Conditional Probability View of Product
Warranties as a Technique for Reducing Perceived
Financial Risk"*

John W. Vann, University of Missouri

*"Source Credibility Effects: A Test of Behavioral
Persistence"*

Ruby Roy Dholakia

Discussant: Linda Price, University of Pittsburgh

SESSIONS END 5:30PM

☀ SUNDAY, OCTOBER 19 ☀

MORNING COFFEE—Foyer
8:00AM–8:30AM

CONCURRENT SESSIONS
8:30AM–10:00AM

- 9.1 *Special Session: Historical Analysis As Method in
Consumer Research: Philosophy and Application—
Pier 5*

Co-chairs: Ronald A. Fullerton, Southeastern
Massachusetts University

A. Fuat Firat, Appalachian State University

"The Philosophy of Historicism"

Ronald A. Fullerton, Southeastern Massachusetts
University

*"Using Historical Evidence for Constructing and
Testing Theory: Dialectic Interpretation of Excep-
tional Events and Facts in History"*

A. Fuat Firat, Appalachian State University

*"Diachronic, Synchronic and Dialectical Approaches
in Economic Anthropology: A Case from Southern
Honduras"*

Jefferson C. Boyer, University of North Carolina

*"The Historical Significance of Consumer Goods
and Practices: A Model for the Study of Their Role
as Instruments of Change and Continuity"*

Grant McCracken, University of Guelph

*"An Historical Perspective Framework to Study
Consumer Behavior and Retailing Systems"*

Erdogan Kumcu, Ball State University

*"Social Communication in Alcohol Advertising Since
WWII"*

Stephen Kline, York University

William Leiss, Simon Fraser University

*"Comparative History as a Research Tool in the
Study of Consumer Behavior"*

Kathleen Rassali, Purdue University at Fort Wayne

Stanley C. Hollander, Michigan State University

*"Insights Into Consumer Behavior from Historical
Studies of Advertising"*

Richard W. Pollay, University of British Columbia

- 9.2 *Competitive Paper Session: The Household as a
Consuming Unit—Pier 7*

Chair: Bernie Jaworski, University of Arizona

*"A Review of Family Consumption Research: The
Need for a More Anthropological Perspective"*

Deb Heisley, Northwestern University

Paula S. Holmes, Northwestern University

"Role Load in the Household"

Ellen Foxman, Washington State University

Alvin C. Burns, University of Central Florida

*"Household Durable Goods Acquisition Behavior:
A Longitudinal Study"*

Michael Mayo, The University of Michigan

William J. Qualls, The University of Michigan

Discussant: Joel Rudd, University of Arizona

- 9.3 *Special Session: Broadening the Focus in Consumer
Socialization: National and International Perspec-
tives—Pier 2*

Chair: Ronald J. Faber, University of Texas

*"The Socialization Approach to the Study of Elderly
Consumers"*

Ruth Belk Smith, University of Maryland

George Moschis, Georgia State University

"Consumer Socialization in Different Settings"

Scott Ward, University of Pennsylvania

*"Long Term Outcomes of Consumer Socialization
from the Mass Media"*

Ronald J. Faber, University of Texas

Thomas C. O'Guinn, University of Illinois

"Learning to Want Things"

Russell Belk, University of Utah

Nan Zhou, University of Utah

- 9.4 *Special Session: Continuous Measures of Advertising
Response—Pier 3*

Chair: Esther Thorson, University of Wisconsin,
Madison

- "Qualitative and Quantitative Indices of Emotion and Prediction of Consumer Responses to Ads"*
Esther Thorson, University of Wisconsin, Madison
Marian Friestad, University of Wisconsin, Madison
"Continuous Measurement of Specific Emotional Response Using the Emotion Monitor"
David A. Aaker, University of California, Berkeley
Douglas M. Stayman, University of Texas, Austin
"The Dynamic Component in Attitudes Towards Pop Music"
Bruno Neibecker, University of the Saarland
 Discussant: **Morris Holbrook**, Columbia University
- 9.5 *Competitive Paper Session: Status, Social Class and Ethnicity—Pier 9*
 Chair: **Mary Lou Roberts**, University of Massachusetts—Boston
"Status Recognition in the 1980s: Invidious Distinction Revisited"
Scott Dawson, Portland State University
Jill Cavell, Louisiana State University
"Social Class and Consumer Behavior: The Relevance of Class and Status"
James E. Fisher, St. Louis University
"The Preferences of Nationalists and Assimilationists for Ethnic Goods: An Empirical Test with French-Canadians"
Jean M. Lefebvre, University of Hartford
 Discussant: **Rohit Deshpande**, Dartmouth College
- 9.6 *Competitive Paper Session: Consumer Behavior Research with Marketing Implications II—Pier 8*
 Chair: **John K. Wong**, Washington State University
"How An Attention Getting Device Can Affect Choice Among Many Similar Alternatives"
Robert M. Schindler, University of Chicago
Michael Berbaum, Brandeis University
Donna R. Weinzimer, Yeshiva University
"Influence on Brand Commitment and Claim Strategy on Consumer Attitudes"
Sanford Grossbart, University of Nebraska
Jim Gill, Arizona State University
Russ Laczniak, University of Nebraska
"Gender Research and the Services Consumer: New Insights & New Directions"
Barbara B. Stern, Rutgers University
 Discussant: **George M. Zinkhan**, University of Houston

COFFEE BREAK—Foyer
 10:00AM-10:30AM

CONCURRENT SESSIONS
 10:30AM-Noon

- 10.1 *Special Session: Historical Analysis As Method in Consumer Research: Philosophy and Application—Pier 5*
 (Session Continued)
 Co-chairs: **Ronald A. Fullerton**, Southeastern Massachusetts University
A. Fuat Firat, Appalachian State University
"The Philosophy of Historicism"
Ronald A. Fullerton, Southeastern Massachusetts University
"Using Historical Evidence for Constructing and Testing Theory: Dialectic Interpretation of Exceptional Events and Facts in History"
A. Fuat Firat, Appalachian State University
"Diachronic, Synchronic and Dialectical Approaches in Economic Anthropology: A Case from Southern Honduras"
Jefferson C. Boyer, University of North Carolina
"The Historical Significance of Consumer Goods and Practices: A Model for the Study of Their Role as Instruments of Change and Continuity"
Grant McCracken, University of Guelph
"An Historical Perspective Framework to Study Consumer Behavior and Retailing Systems"
Erdogan Kumcu, Ball State University

- "Social Communication in Alcohol Advertising Since WWII"*
Stephen Kline, York University
William Leiss, Simon Fraser University
"Comparative History as a Research Tool in the Study of Consumer Behavior"
Kathleen Rassali, Purdue University at Fort Wayne
Stanley C. Hollander, Michigan State University
"Insights Into Consumer Behavior from Historical Studies of Advertising"
Richard W. Pollay, University of British Columbia
- 10.2 *Competitive Paper Session: Broadening the Context of Consumer Behavior: Drug Usage, Shoplifting, and Voting—Pier 2*
 Chair: **P. J. O'Connor**, Baruch College
"Stages of Involvement With Alcohol and Heroin: Analysis of the Effects of Marketing on Addiction"
Peter J. DePaulo, University of Missouri-St. Louis
Mary Rubin, University of Missouri-St. Louis
Brenton Milner, University of Missouri-St. Louis
"An Exploratory Study of Adolescent Shoplifting Behavior"
George P. Moschis, Georgia State University
Dena Thometz Saliagas, Georgia State University
James J. Kellaris, Georgia State University
"Asymmetries in the Effect of Campaign Expenditures on Voting Patterns"
George Siomkos, New York University
Avijit Ghosh, New York University
 Discussant: **Craig Andrews**, Marquette University
- 10.3 *Special Session: The Influence of a Product's Country of Origin on Consumer Attitude and Buying Behavior—Pier 3*
 Chair: **Susan B. Hester**, Cornell University
"Does Patriotism Have Any Marketing Value—Exploratory Findings for the 'Crafted With Pride in USA' Campaign"
Sayeste Daser, Wake Forest University
Havva J. Meric, East Carolina University
"Country of Origin and the 'Made in the USA' Television Campaign: A Rating and Choice Analysis of Consumer Decision Making"
Richard Ettenson, University of Maryland
Janet Wagner, University of Maryland
Gary Gaeth, University of Iowa
"Consumer Behavior and Apparel Purchase in Canada"
Susan B. Hester, Cornell University
Mary Yuen, University of Alberta
- 10.4 *Competitive Paper Session: Consumption Over Time and Across Activities—Pier 9*
 Chair: To Be Announced
"Time Budgets and Consumer Leisure-Time Behavior: An Eleven-Year-Later Replication and Extension (Part 1)"
Douglass K. Hawkes, The University of Wyoming
"Complementarity and Substitutability Among Discretionary Activities with Time Diaries"
William A. Weeks, Washington State University
U.N. Umesh, Washington State University
John K. Wong, Washington State University
"Cohort Analysis of the Expenditure Patterns of the Elderly"
Louise A. Heslop, Carleton University
 Discussant: **Joseph Rentz**, University of Tennessee
- 10.5 *Special Session: Paper Fair—Pier 7*
"A Decade Review of Research Based on the Consumer Expenditure Survey"
Mohamed Abdel-Ghany, University of Alabama
"Consumer Expenditure Survey Methodology: The Continuing Survey vs. the 1972-73 Survey"
Thesia I. Garner, Bureau of Labor Statistics
"The Ongoing Survey of Consumer Expenditures: Strengths and Weaknesses of the Resulting Datasets"
Sherman Hanna, Kansas State University
"Consumer Perceptions of Convenience Food Users"
John H. Antil, University of Delaware
"The Influence of Shape on Product Preference"
Marvin Berkowitz, Fairfield University

"Toward a Global Cognitive Model of Persuasion: Interactive Effects of Cognitive Characteristics of Source, Message & Recipient"

J.C. Chebat, University of Quebec at Montreal

M. Laroche, Concordia University

M. Filiatrault, University of Quebec at Montreal

Catherine Watson, Dawson College

"Phenomenology: New Methods for Asking Questions and Interpreting Results"

Jeffrey F. Durgee, RPI

"Understanding Children's Consumer Scripts"

Audrey Guskey Federouch, University of Pittsburgh

Irene Hanson Frieze, University of Pittsburgh

"The Sensitivity of Canadian Consumer Product Market Segments to Changes in Macroeconomic Conditions"

Adam Finn, University of Alberta

"The Nominal Group Technique as an Alternative to the Unstructured Focus Group as a Qualitative Research Tool in Marketing"

Jerome M. Katrichis, The University of Michigan

"An Information Integration Analysis of How Trust and Expertise Combine to Influence Source Credibility and Persuasion"

J. Mowen, Oklahoma State University

J. Wiener, Oklahoma State University

S. Joag, Mankato State University

"Understanding Semantic Compatibility in Communication"

Larry Percy, HBM/Creamer, Inc.

10.6 Special Session: Paper Fair—Pier 8

"An Introduction to a Cognitive-Behavioral Perspective of Consumer Behavior"

Tom Aslin, University of Michigan

Mike Rothschild, University of Wisconsin

"A Quick and Simple Benefit Segmentation Based on Conjoint Experiments"

J. Agrawal, University of Buffalo

"The Internal Atmosphere of a Retail Store"

Patrick Buckley, Queens University

"Television and the Elderly: Chronological Age As a Predictor of Viewing Habits and Attitudes Toward Advertising"

Scott Dawson, Portland State University

E. Spangenberg, Portland State University

"Price Dispersion in Consumer Markets: Theory, Empirical Evidence and Consumer Policy Implication"

J. D. Forbes, The University of British Columbia

"Predicting Frequency of Problems Experienced by Owners of Used Cars: A Statistical Analysis of Six Years of Consumer Reports' Survey Data for 1979 Model Cars"

Monroe Friedman, Eastern Michigan University

"An Exploratory Assessment of the Effects of Alternative Advertising Appeal"

J.S. Johar, California State University

Madhav N. Segal, Southern Illinois University

"Towards An Epistemology of Consumption Symbolism: An Interdisciplinary Review"

Robert E. Kleine, III, University of Cincinnati

Jerome B. Kernan, University of Cincinnati

"Consumer Use of Videotex Services in France"

Robert N. Mayer, University of Utah

"An Empirical Test of the Cognitive Response Model: The Importance of the Response Source Dimension"

Donald G. Norris, American University

"Price Negotiation Among Retail Merchants: Who Dickers and Who Doesn't?"

John Schouten, University of Utah

"Source Effects in Persuasion Experiments: A Meta-Analysis"

Elizabeth J. Wilson, The Pennsylvania State University

Program Changes

1. Meryl Gardner (NYU) will chair session 2.2 "Visual and Verbal Information Processing"
2. April Atwood (University of Washington) will chair session 4.4 "Diffusion, Innovation Resistance and Social Networks"
3. Susan Heckler (Duke University) will be the discussant for session 2.2 "Visual and Verbal Information Processing"
4. Scott Roberts (University of Utah) will chair session 10.4 "Consumption Over Time and Across Activities"
5. Robert W. Ruekert (University of Minnesota) will be the discussant for Session 6.3 "Current Perspectives in Organizational Buying Behavior"
6. In session 5.1 "Film and Consumer Behavior: ACR Goes to the Movies" the title of L. Elizabeth Martin's paper should be "Modeling the Choice Process for Experiential Products: A Preview"
7. In session 9.6 "Consumer Behavior Research with Marketing Implications II" the title of the Schindler, Berbaum and Weinzimer paper should be "How an Attention Getting Device can Affect Quick Choice Among Similar Alternatives"
8. In session 8.6 "Consumer Behavior Research with Marketing Implications I" John W. Vann's Affiliation should be Ball State University
9. Session 8.4 "Researching Consumers to Stimulate Creativity in Commercial Communication" has been canceled by the Organizers

**CONFERENCE ENDS
NOON SUNDAY**

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ACR PRESIDENTIAL ADDRESS: HAPPY THOUGHT

Russell W. Belk, University of Utah

The world is so full of a number of things
I'm sure we should all be as happy as kings
(Stevenson 1905)

Learning from the format of sermons, I thought it best to begin my address with a quotation from a great source of wisdom and insight--A Child's Garden of Verses by Robert Louis Stevenson. For this short poem, "Happy Thought", distills the key issues that I believe consumer research ought to address. It is also short enough that it should not greatly tax my limited abilities as a literary critic.

With a tremendous sense of childlike wonder, Stevenson's short poem observes all of the wondrous things of the world. We may assume that this includes most nouns--people, places, and things--that exist, can be imagined to exist, or can be created in the world. They are all, significantly, external things that exist (or are imagined to exist) outside of the self. In other words, the things that are held to bring us happiness are out there, in the world. Furthermore, Stevenson makes clear that these things are diverse and abundant. Implicitly, they are there for the taking--available to all. For the sort of happiness that these things should bring us is the happiness of kings--those who can command any thing they wish and who have the power and resources to have their wishes fulfilled. If kings are the epitome of happiness, it is presumably for this reason. And in the view of the world expressed in "Happy Thought", there is enough "stuff" in the world that we all can be royally happy. The child is being told here that fairy tales can come true and happiness can be theirs--all through the wonders of consumption. We have only to partake from the boundless cornucopia of the world to find happiness. And if we partake enough we will be as happy as kings. And thus, the consumer is king.

Written at the end of the 19th century, "Happy Thought" is a product of its age. As consumer historians have recently realized, this age followed the great consumer revolution in the U.S. and Europe (Fox and Lears 1983, Harris 1981, Leiss, Kline, and Jhally 1986, McKendrick, Brewer, and Plumb 1982, Williams 1982). Paralleling and emerging from the industrial revolution on the supply side, this great consumer revolution produced the fairy tale view of the world of goods that is expressed in Stevenson's poem. The poem depicts the resulting consumer view that in things lie happiness--a view that persists today in spite of growing skepticism. Having reigned for this long as the dominant consumer ideology, it is perhaps time that we begin to address the issue of the relationship between consumption and human well-being. Our mission as consumer researchers should in fact be, I would suggest, to examine the relationship between consumer behavior and the rest of life. If the world is indeed so full of a number of things, can we and should we be, through consumption, as happy as the imaginary kings in Stevenson's poem?

Consumer Behavior and the Rest of Life

Perhaps the key reason that we have not addressed such issues is that we have tended to examine consumer behavior in isolation from other aspects of our existence. One key to gaining a better sense of balance in consumer research would seem to involve relating consumer behavior to the rest of human behavior. In another paper (Belk forthcoming), partly abstracted in a recent ACR Newsletter, I have argued that we should reject the overly rational model of consumers as computers. These comments will suggest an alternative in which consumers are viewed as human beings. More to the point, the present view recognizes that people, while technically consuming something from the moment of their conception to the

moment of their death, if not beyond, are only consumers in an active and significant way for a small fraction of their lives. Some of the most significant activities for human beings--walking, talking, loving, working, playing, thinking, feeling, mating, learning, resting, sleeping, fighting, singing, grooming, dancing, and praying, involve consumption in only the most tangential of ways.

Sartre (1956) describes three interrelated existential states--having, being, and doing. Of these, only having directly implies consumption, and even then only for certain of the things that may be had. There is, in other words, much more to life than acquiring and consuming things. This very simple and obvious point somehow seems to have escaped consumer researchers. There seems no other explanation for the care and detail with which we have imagined that consumers make choices--as if they were the sole focus of daily life. However true this may be for some consumers some of the time, it is not true of most consumers most of the time. We need more complex models that recognize that consumption is merely one small aspect of human life. At the same time that we enlarge models to recognize the full complexity of the relationships between consumption and the rest of life, our models should pay particular attention to those consumers and moments that do hold consumption to be a dear and valued activity. In addition to being the instances in which consumption is of greatest importance to consumers, these are likely to be the instances in which consumption is most worth studying in order to inform us concerning matters of importance to the human condition. At a broader level we also need to examine how and to what extent consumption becomes elevated above other aspects of daily life (e.g., is consumption the new religion?), and what effects such increases in consumption importance may have on life satisfaction.

Macro Consumer Behavior

The view that emerges when consumer behavior is placed within the perspective of the rest of life, might be called macro consumer behavior. Macro consumer behavior concerns aspects of consumer behavior that are likely to have little interest to the decision making of a marketer or an advertiser, but have great interest to members of society and to their individual and collective well-being. The issues involved are more timeless and are likely to have as much interest in 200 years as they do today. The issues considered in this perspective are also likely to have at least as much relevance in third world nations as they do in highly developed nations (e.g., Belk 1986, Belk and Nan 1986). This excludes most of the consumer research done to date.

In a world so full of wondrous things, both natural and humanly created, there is much to engage us--both as consumers and as consumer researchers. In a world so sharply delineated between the consumption of haves and have-nots, there is much to concern us. And in a world so full of high level consumption, but so empty of human fulfillment, there is much to challenge us. And yet we have spent (some might say squandered) the first couple of decades of consumer research on what Saul Bellow calls "the dog-food level of things" (Bellow 1975, 264-265).

By "the dog-food level of things" Bellow meant that which is petty, stupid, or dull. And that is just what we have specialized in within consumer research. We have been so concerned with consumer micro behaviors such as examining an advertisement or choosing a brand, that we have ignored whole categories of significant consumer macro behaviors such as exploring a lifestyle or choosing a consumption level. In investigating consumer behavior we have been petty, stupid, and dull rather than profound, insightful,

and interesting. We have, by and large, failed to relate consumer behavior to the rest of human existence and have thus failed to fully appreciate the meaning of consumption.

The meaning of consumption is more than just profit or loss for marketers and more than just product or service satisfaction for consumers. Beyond profit or loss to marketers there is profit or loss to society resulting from consumption. (Consider for instance the societal impact of the consumption of books and television programming.) And beyond product or service satisfaction there is life satisfaction and human well-being. (Consider for instance the impact of books and television on sense of self and consumption aspirations.) Besides the day-to-day choices of a consumer, there are the decade-to-decade consumption choices made by societies. There is much that is of great human consequence in consumption, and yet we have for the most part wasted our talents on the dog-food level of things.

The nature of micro consumer behavior issues is familiar to us all. We may not have fully solved such issues, but we have diligently, carefully, and rigorously addressed them. It is useful however to systematically contrast the nature of micro versus macro consumer behavior issues. Even though it is limiting to view variables as independent and dependent rather than as interdependent, this traditional distinction is useful in contrasting micro and macro consumer behavior. Consider first the orientation of micro consumer behavior.

UNDERLYING QUESTION: What arrangement of the marketing mix will have what effects on the purchase behavior of what types of consumers?

KEY DEPENDENT VARIABLES: Buying choices (variables or processes such as consumer information processing, dissonance, and satisfaction are only of interest as they affect buying).

INDEPENDENT VARIABLES: Marketing variables and individual differences (environment and culture are seen as external constraints).

These specifications may be compared to those of macro consumer behavior.

UNDERLYING QUESTION: What effects do marketing activities and buying have on culture and human well-being?

KEY DEPENDENT VARIABLES: Individual, social, and cultural effects.

INDEPENDENT VARIABLES: Advertising, distribution, product offerings, prices, acquisition, consumption, and disposition choices, and consumer spending patterns.

Although marketing variables remain independent variables of interest, the macro perspective makes consumer choices (no longer restricted to buying choices) an independent variable rather than the key dependent variable. In addition, the environmental and cultural variables, taken as external constraints in the micro perspective, become key dependent variables in the macro perspective. In other words, the macro perspective shifts the focus from the consumer to the human being. Rather than ask how certain arrangements in life affect consumption, it asks how consumption affects the rest of life.

Some Suggestive Macro Consumer Behavior Issues

Perhaps the best book to raise consciousness about macro consumer behavior is the photo essay Rich and Poor by Jim Goldberg (1985). Besides photographs of each group, Goldberg had the subjects write comments interpreting the photographs--in effect, auto-driving them (Heisley and Levy 1985). While these comments lose a great deal without the accompanying photographs, two captions may

suggest the nature of the contrasts set up in the book and some of the macro consumer behavior issues they pose.

From a poor girl: I look ugly and serious I wish I Had Money then I can look and Be who I want to Be.

From a rich man: I am trapped in this very consuming game where I can't have anything that is average. I have to have a super car, a super wife, a super house. I have at the bottom of everything a lack of self-confidence. I am afraid of being a loser.

Both space and lack of research preclude a full delineation of macro consumer behavior issues or even a full discussion of a single issue. The following list is instead intended to further clarify what macro consumer behavior is seen to entail and to perhaps spur research on issues such as these. It is organized according to three aspects of consumption--acquisition, consumption/use, and disposal/disuse--and within these considers personal, interpersonal, and cultural effects (the three macro dependent variables noted above).

SUGGESTIVE MACRO CONSUMER BEHAVIOR ISSUES

I. Acquisition Processes

A. Personal Focus

1. What is the relationship between the level and importance of consumption in a person's life and their happiness and sense of well-being?
2. How do consumers make tradeoffs between money, durables, time, discretionary nondurables, and experience?
3. Why do consumption pathologies such as anorexia nervosa, credit abuse, and greed occur?

B. Interpersonal Focus

1. What motivates the economically "irrational" exchange of gifts?
2. How does acquiring a bodily organ transplanted from another person affect self-image?
3. What should replace the exchange paradigm in order to understand phenomena such as altruism and love?

C. Cultural Focus

1. How will the sudden development of a consumer culture affect China?
2. When did "consumer culture" originate in the world's cultures, for what reasons, and with what effects?
3. How do marketing activities such as advertising affect cultural values?

II. Consumption/Use Processes

A. Personal Focus

1. How do consumption objects become symbols of wealth, age, sex, political preference, and other statuses?
2. How do the consumption of experiences and things oppose and reinforce one another?
3. What types of people prefer intangibles to tangibles and why?

B. Interpersonal Focus

1. Is sharing a natural human inclination?
2. What are the consequences of various ways of distributing wealth, property, and possessions?
3. What function is played by shared consumption rituals and myths such as Santa Claus?

C. Cultural Focus

1. What are the effects of sharing consumption symbols such as the Statue of Liberty, places, and sports teams?
2. Is consumption now the central reason for the continued existence of families?
3. How are we affected by media portrayals of consumption?

III. Disposal/Disuse Processes

A. Personal Focus

1. What strategic discarding of consumption objects is done during geographical and status transitions?
2. Does increased sense of ability result in a decreased "security blanket" of goods?
3. How do consumers regard the conspicuous waste of prior generations of wealthy people as revealed in their mansions?

B. Interpersonal Focus

1. How does withholding or withdrawing material goods from children (as punishments) affect their attitudes toward these goods?
2. What strategies of identity preservation are evident in the disposition of possessions via wills?
3. What pleasures and hostilities may be involved in giving gifts to others?

C. Cultural Focus

1. Does the increase in secondary marketing systems such as flea markets and garage sales reflect a lessened sense of charity in failing to give used items to others or to redistribution agencies?
2. Will we continue to become more of a "kleenex culture" in which disposability is preferred to reuse?
3. How do certain items of "junk" become redefined as collectible, while others do not?

This is only a brief and suggestive list, but it should convey some sense of what macro consumer behavior entails. We have begun to research and consider only a few of these macro issues. Others have previously called for broadening consumer behavior (e.g., Zaltman and Sternthal 1974) and for considering consumer behavior from a macromarketing or aggregate perspective (e.g., Firat 1985, Firat and Dholakia 1982). These are steps in the right direction, but they do not go far enough in advocating the study of consumer behavior for its own sake (rather than that of marketing) nor do they consider consumer behavior as existing within the broader tableau of human behavior. By adding a macro consumer behavior perspective to our current micro consumer behavior perspective I believe we will have a significant discipline in the next couple of

centuries. Without a commitment to macro consumer behavior I am not confident that consumer behavior will persist as a scholarly field of significance to humanity.

The adoption of macro issues for study in consumer research is a major shift requiring a new perspective. It is also likely to require new methods that go beyond the research methods and techniques that we have used in the past; but that is another topic that is beginning to be addressed in the field. This is not to say that some macro consumer behavior issues cannot be addressed by our traditional experimental and survey research approaches. But the historical and cultural sweep of many of the issues in macro consumer behavior will demand new methods, broader scholarship, and more critical thinking than have been typical in our field.

Having begun with a short poem, it seems appropriate to end with one also. Since the first poem was a happy childlike poem, I'll close with a more somber childlike poem that suggests how ineffectual we are if we fail to address the human consumer issues that matter in the world.

Oh the rich man's got his troubles
And the poor man's got some too,
But if I had my way about it kiddies
I'd tell them both a few,
For the world is just as lousy rotten
As people damn well want it to be (Patchen 1960)

The question is: how much creative energy are we willing to put into rethinking our approach to consumer behavior research? If we adopt the research agenda of macro consumer behavior, as I feel we must, the challenge and excitement will be enormous. More importantly, we will have a chance to affect the human condition for the better. We will then have contributed something to the world that may indeed make it a happier place.

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PRESENTATION OF THE ACR FELLOW IN CONSUMER BEHAVIOR AWARD

John G. Myers, University of California, Berkeley

It is a great pleasure to be standing before you today to speak on behalf of the Association in presenting its Fellow in Consumer Behavior Award. Before reviewing the contributions of the person we are about to honor, I want to say a few words about the nature and significance of the award itself.

The purpose of the ACR Fellow award is to recognize those whose contributions have made a significant impact on scholarly work in consumer behavior. This is the Association's "Nobel Prize." Regretfully, the King of Sweden could not be here today to honor our recipient! The point is that in spirit, if not yet in the substance of prestige and monetary benefits that go along with a Nobel Prize, the ACR Fellow award is the highest honor we can bestow on a scholar in the field.

The selection of an ACR Fellow is a complex and difficult process. It involves canvassing the membership of the Association, committee meetings, conference calls, presentations to the Board, much discussion and vigorous debate. As chairman of the committee, I offer you the untestable proposition that anyone who makes it through this rigorous evaluation process should receive the award, regardless of their contributions to the field!

Another measure of its significance is the quality of the people who have received it in the past. In 1980, the first year it was given, the recipients were John Howard and James Engel. Two years later in 1982, George Katona, Robert Ferber, and Sidney Levy received the award. In 1984, Harold Kassarian and William Wells were honored. Today we are here to honor Everett Rogers as he joins this prestigious circle of consumer behavior scholars.

Ev, as he is affectionately called by many friends, has a particularly exciting paper to present today called "The Critical School and Consumer Research." I will try to restrain my enthusiasm for elaborating on his contributions so we can hear what promises to be a delicious dessert. Like many prior ACR Fellows, it is important to appreciate that beyond the enormous contributions evidenced in his writings and published record, is a human being. He is approachable, articulate, sensitive, and has influenced the lives of thousands of students, colleagues and professionals in his roles as teacher, researcher, consultant, administrator, and "friend."

Like George Katona, we are honoring someone today, who has not seen the wisdom of working on consumer behavior under the protective umbrella of a Business School and a Marketing Department. On the other hand, it is safe to say that the majority of ACR members who work on consumer behavior within this university setting know or have been influenced by his work.

Everett M. Rogers is a sociologist whose theoretical and empirical work in mass communications, diffusion of innovations, and personal influence has significantly influenced the development of these subjects in consumer behavior. His work has impacted academic and professional researchers in business, government, and nonprofit organizations. His research and writing has influenced the implementation of policy and legislation at the federal government level, improved the management and efficiency of nonprofit organizations, and significantly extended our understanding of new product diffusion and adoption processes in the private sector.

He received his B.S., M.S., and Ph.D. degrees from Iowa State University. Prior to entering academic life, he was on active duty with the U.S. Air Force and rose to the position of Captain. His first formal academic appointment was as Assistant Professor and later

Associate Professor of Rural Sociology at Ohio State University where he served from 1957-1963. A book which profoundly influenced consumer research, Diffusion of Innovations, was completed during his tenure at OSU and published in its first edition in 1962. From OSU, he moved to Michigan State where he served as Associate Professor and Professor of Communication from 1964-1973. He joined the faculty of the University of Michigan in 1973 and served as Professor of Population Planning and Journalism there until 1975. His next appointment was as the Janet M. Peck Professor of International Communication, Institute for Communication Research, Stanford University. While at Stanford, he was a Co-Principal Investigator of the Stanford Heart Disease Prevention Project. This project is still perhaps the most significant effort ever undertaken to apply mass communication and medical health principles and procedures to a far-reaching and significant social problem. From Stanford, Rogers moved to his present position at the University of Southern California where he is Associate Dean of Doctoral Studies and Walter H. Annenberg Professor of Communications at the Annenberg School of Communications.

Ev is a prolific writer and a highly productive scholar. His articles and books span the subjects of communication, innovation, diffusion, adoption, and similar processes. The diversity of topics and areas to which he has applied theory and method from these theoretical roots is most striking and extends to the international as well as the national sphere. Some examples are transportation (van pooling), solar energy, mass transit, health technology, hurricanes, Kentucky Green Thumb Videotex, adoption of home computers, medical research, the role of "demonstrations," television in Latin America, cross-cultural studies, and many others. He has written, co-authored, or edited 19 books, currently has original writing done for 18 chapters in books, and between 1977 and 1985 alone has published 38 articles in American and foreign journals. He sits on the Editorial Boards of 12 journals, was President of the International Communication Association, 1980-81, is a Fellow in the American Sociological Association, International Communication Association, and the American Association for the Advancement of Science, and has held a number of other honors and appointments such as Fulbright Scholar, Lefrak Lecturer in Urban Studies at Maryland, and Visiting Professorships in Latin America.

Let me read you a few titles of recently published articles and have you note the scope and diversity of these contributions:

"Re-Invention in the Innovation Process" (co-author), Knowledge, 1980.

"Communication and Development in the People's Republic of China," Educational Broadcasting International, 1980.

"Communication Networks and Political Behavior," Communication, 1980.

"Manipulation and Mass Communication: Lessons From Research on the Diffusion of Innovations," Mass Communication, 1981.

"A Cross-Cultural Study of Consensus Development Process in Sweden and the United States" (co-author), Journal of the American Medical Association, 1982.

"The Flow of Television Programs in Latin America" (co-author), Communication Research, 1984.

"The Beijing Audience Survey" (co-author),
Communication Research, 1985.

"The Diffusion of Home Computers Among
Households in Silicon Valley," Marriage and
Family Review, 1985.

"Computers and Communication" (co-author),
Information and Behavior, 1985.

"The Role of the Research University in the
Information Society," Keio Communication
Review, 1985.

"Interdependencies Among Uses of a New
Communications Technology," ACR Proceedings,
1985.

"The Critical School and Consumer Research,"
ACR Annual Conference, Toronto, Canada, 1986.

And here are the titles of just eight of his more well-
known books:

Social Change in Rural Society, Appleton-
Century-Crofts, 1960.

Diffusion of Innovations, Free Press, 1962
(second edition published in 1983).

Modernization Among Peasants: The Impact
of Communication (co-author), Holt, Rinehart,
and Winston, 1969.

Communication Strategies for Family
Planning, Free Press, 1973.

Communication in Organizations (co-author),
Free Press, 1976.

Silicon Valley Fever: The Growth of High-
Technology Culture (co-author), Basic Books,
1984.

Communication Technology, Free Press (in
press).

Research Methods and New Media, Free Press
(in preparation).

Not only are these works widely circulated and quoted
within the United States, but they have been translated
and made available in numerous foreign editions. It is
no small accomplishment to have what you have written
being read in Japanese, Spanish, Russian, Chinese,
French, Swedish, Italian, Korean, and Arabic! Not
content to just teach, consult, and publish books and
articles, he is the co-founder and vice president of a
company, Cognos Associates, in Los Altos, California.

Ev is not alone among behavioral scientists in the
diversity and richness of his contributions, but he has
had a particularly important impact on consumer
researchers in understanding personal influence and
diffusion processes. In my view, this book on Diffusion
of Innovations is particularly noteworthy. Although
some might argue that the foundation for this stream of
research is better attributed to Katz and Lazarsfeld's
Personal Influence published in 1955, or Schramm's
classic 1961 articles on communication, Rogers' book in
1962 did much to legitimize and give credibility to
this important subject.

Among other things, the book extended the basic two-step
flow ideas of personal influence into a fully developed
stage theory of the process, and provided a host of
testable propositions derived from the theory. Research
on consumer diffusion and adoption processes, opinion
leadership, and empirical studies of many related
constructs during the 1960s and 1970s by people such as
Sheth, Silk, Bauer, Myers, Nicosia, King, Kassarian,

Pessemier, Montgomery, Arndt, Robertson, Engel, and many
others, drew heavily on Rogers' theories and methodology.
Although not so obvious, the quantitative stream of
diffusion research by people such as Bass and Midgley
also draws on this classic work. Robertson's excellent
Innovative Behavior and Communication, published in 1971,
was much affected by it. In sum, the established stream
of research on diffusion, adoption, mass communication,
and related processes within the consumer behavior
field has been significantly affected by Everett Rogers
and his works.

Ev, on behalf of the Association, it gives me great
pleasure to present you with an ACR Fellow in Consumer
Behavior Award. Please receive this handsome plaque
inscribed as follows:

The Association for Consumer Research presents
the Fellow in Consumer Behavior Award to
Everett M. Rogers for his pioneering work in
consumer behavior, personal influence, and
diffusion of innovation processes.

THE CRITICAL SCHOOL AND CONSUMER RESEARCH

Everett M. Rogers¹, University of Southern California

Abstract

The empirical and critical schools of social science research represent two quite different approaches. The former is typified by quantitative empiricism, functionalism, and positivism, while the critical school is characterized by a more philosophical emphasis, greater attention to context, an early Marxist orientation, and a concern with who controls a system. Here we trace the historical rise of the critical school, and its contemporary differences in viewing consumer behavior. The critical school tends to be concentrated in Europe, while the empirical school is strongest in the United States. Prospects for greater understanding of the critical school by members of its counterpart are discussed, along with implications of such understanding for consumer researchers.

Introduction

The purposes of this paper are (1) to outline the important intellectual differences between the empirical and the critical schools of social science, and (2) to bring the viewpoint of the critical school to bear on the scholarly concerns of consumer research. Most consumer researchers that I know are empirical scholars, perhaps only dimly aware that an alternative approach to their scholarly work even exists. Consumer research is highly multidisciplinary in nature, but past scholarship has been conducted within a highly empirical and quantitative paradigm. Here we discuss a quite different theoretical viewpoint that has useful implications for the conduct of consumer research.

The present paper is an attempt to point one specific direction for the small but growing concern with epistemological considerations in consumer research. During the 1980s, a diminutive debate has begun between defenders of logical empiricism (an approach in which most of us have been trained) and the challenges of relativism (Anderson 1986; Peter and Olson 1983),² semiotics (Mick 1986),³ humanistic approaches (Hirschman, 1986), and various other alternatives. In 1986, an important conference on marketing and semiotics was held at Northwestern University, and starting in 1987, a quarterly newsletter, Marketing Signs, covering the intersection of marketing, semiotics, and consumer research, will be published by Indiana University.

Constructive critics of marketing and consumer behavior like Deshpande (1983) and Peter and Olson (1983) point out that we are expanding rapidly in our technical ability to test quantitative hypotheses, but lag in "the development of new, rich explanatory theories." The Association for Consumer Research, after several years of general complacency with its direction of intellectual progress, this year has selected questioning and challenging individuals as president and conference co-chairs. One of these individuals, Russell W. Belk (in press) noted that "Consumer behavior research has not studied consumer behavior." Buying, but not consuming, is investigated. The general mood of many consumer scholars seems to be that of growing dissatisfaction with more-of-the-same research. But in the search for paradigmatic alternatives to logical empiricism, no scholar of consumer research has yet looked to the critical school.

The Terminology of Empirical and Critical

The world of social science scholarship can be divided for certain purposes into two main schools, based on the nature of their ideology, assumptions, and methods of approaching research. These are commonly referred to as the "empirical school" and the "critical school," although this terminology is of an oversimplification.

While not everyone agrees on exactly what is meant by these terms, nor on who belongs to which school, I believe they offer a useful polar typology. The empirical school is commonly characterized by quantitative empiricism, functionalism, and positivism. In the past it has generally emphasized study of individual behavior change, while paying less attention to the broader context in which such behavior change is embedded. In contrast, the essence of the critical school is its more philosophical emphasis, its focus on the broader social structural context of

behavior change, its early Marxist orientation (although by no means are all critical scholars Marxists today), and a central concern with the issue of who controls a system.

We prefer to utilize the terminology of "empirical school" and "critical school." Paul F. Lazarsfeld (1941) first referred to these two scholarly viewpoints as "administrative research" and "critical research." His article appeared in a journal called Studies in Philosophy and Social Research, organized by Lazarsfeld to include Theodor W. Adorno and other representatives of the critical school, as well as such empirical scholars as Harold D. Lasswell. The terminology for the two schools utilized by Lazarsfeld (1941) in his article seems to have been acceptable to both schools at that time (Lang 1979). Adorno's colleague, and the director of the Frankfurt School (to be described shortly), Max Horkheimer (1937, pp. 188-243), preferred "critical school" as a more appropriate label than "Marxist school," which the institute had originally considered as its name in the 1920s (Jay 1973, p. 8).

Certain critical scholars resent the nomenclature of an empirical and a critical school because they claim, quite correctly, that they sometimes use empirical data in their critical analysis. Nevertheless, most critical scholars would agree that a critical viewpoint is the dominant, shared viewpoint of their school. Most empirical scholars would agree that the use of empirical data is a dominant, shared characteristic of their school.

Most critical scholars identify themselves as such. In contrast, most empirical scholars do not think of themselves as associated with any particular "school" of thought, other than with consumer research in general. In part this lack of identification with the empirical school is because many empirical scholars (especially those in the United States) do not know of the existence of the critical school. In any event, when an American researcher is called a "positivist" by a European or a Latin American, the U.S. scholar is likely to be surprised; he/she had a self-image as just a consumer researcher, or as a psychologist, a marketing scholar, or as a communication researcher. The puzzled empirical scholar may not even be sure exactly what a positivist is.

History of the Critical School

The roots of the critical school trace to Frankfurt, Germany in the 1920s. The Institute for Social Research (Institut für Sozialforschung) was founded in 1923 as a research center dedicated to a critical and Marxist approach.⁴ The Institute was loosely associated with the University of Frankfurt and its director was appointed as a professor at the university, but the Institute maintained its financial independence through an endowment provided by a successful German grain merchant.

Most of the key figures in the Frankfurt Institute came from backgrounds in prosperous Jewish families, but were committed to a Marxist approach to understanding society. The first Director, Carl Grünberg, stated that Marxism would be the ruling principle of the Institute. However, the Institute staff soon began to question orthodox Marxism, and eventually (in the late 1950s) moved even further away, dropping class conflict as "the motor of history" and replacing it with domination (Jay 1973, p. 256). In 1931, Max Horkheimer became Director of the Institute, and it began to attract an outstanding set of German and Austrian scholars: Theodor W. Adorno, Leo Lowenthal, Erich Fromm, Herbert Marcuse, and others.

Critical scholars have long had a central interest in social class structure as one of their main concepts, along with the associated concepts of conflict, domination, and dialectic.⁵ Such an orientation headed many critical scholars toward studying dominance and inequality, and a liberating ideology still pervades the critical school.

With the rise of Hitler in Germany in 1933, Frankfurt became an inhospitable site for Marxist scholars with Jewish backgrounds, and in 1934 the Institute for Social Research moved, after one year in Geneva, to New York, where it was affiliated with

Columbia University until it returned to Frankfurt in 1949. During its U.S. sojourn, Adorno and others' (1950) The Authoritarian Personality was completed by the Institute staff, with funding from the American Jewish Committee, a book that was to become a social science classic. This investigation utilized empirical data about prejudice, but generally followed a critical approach.

While the Frankfurt Institute was in the United States, American social science methodology and philosophy of science were integrated into the critical school, and this American empiricism was then introduced to Germany in 1949 when the Institute for Social Research returned to Frankfurt. Empirical methodology gradually caught on in Europe, in part through the teachings of the Frankfurt School, but mainly as a result of other types of Euro-American contact. Today most European social scientists utilize a combination of the empirical and critical approaches, with greater emphasis on critical methods than in the U.S. (Blumler 1980).

Although such key figures in the Frankfurt Institute as Max Horkheimer, Herbert Marcuse, and Theodor W. Adorno are now deceased (in 1973, 1980, and 1969, respectively), and others like Leo Lowenthal are retired, the intellectual influence of the original Frankfurt School continues, especially in Europe. The New Left and the radical movements of the 1960s led to a rekindling of interest in critical theory in both the U.S. and Europe (Held 1980), especially in the writings of Herbert Marcuse, who gained a cult-like following. Jürgen Habermas is the modern-day intellectual leader in recasting and remodeling critical theory. He is a former assistant in the Frankfurt Institute in the 1950s, and presently a professor at the University of Frankfurt. Although highly critical of positivism and preferring dialectical methodology over empirical approaches (Jay 1973, p. 251), Habermas has reformulated critical theory to develop a theory of society oriented to the self-emancipation of people from domination (Held 1980, p. 250).

Contrasting the Critical and Empirical Schools

A concern with the ownership and control of social institutions dominates the critical school. The central questions for critical scholars are "Why?" or "Why not?" while the central research questions for the empirical school are "How?" and "How much?" The empirical school seeks to explain, predict, and control human behavior (the conventional goals of science), while the critical school seeks to liberate. So critical scholars want to know who controls a system? Why? To whose benefit?

The Frankfurt School, originally influenced by Marxist theory, questioned capitalistic society, and looked to the wide scope of social structure to explain social problems and to indicate ameliorative policies. Today, critical scholars emphasize the social-political-economic context of human behavior, rather than looking within the individual for explanations of the individual's actions. Critical scholars argue that to ignore the holistic context is to seriously distort the reality of behavior, preventing an insightful understanding of it. Because such quantitative research designs as the survey and experiment are generally individualistic and microanalytical, and hence not able to tell us much about social context, critical scholars often prefer less-structured methods that yield more qualitative data.

For example, during the Black Plague in London, it was eventually discovered that every individual who drank water from London's main water pump contracted cholera and died. Anyone who did not drink water from the main pump lived. Here is a case of a single causal variable with clearcut effects. The tricky research task for scholars of that day was to identify the single cause out of a host of other variables. Had they understood a theory of waterborne disease, identifying the cause would have been easier, but this theory had not yet been developed. So scholars in London had to investigate the context of cholera-transmission by open-ended searching for the causal variable. Thus when theory is insufficient and when there is incomplete understanding about some phenomena, investigation of the context is the appropriate research strategy. Critical scholars would emphasize this research strategy for contemporary consumer researchers.

One research method utilized by both the empirical and critical schools is content analysis, although they use this method in quite different ways. Empirical communication scholars utilize content analysis methods to categorize mass media content into the form of quantitative data, which they then analyze to test certain hypotheses. Content analyses of mass media messages by critical scholars are usually less quantitative (they may be entirely qualitative), and more semiological in nature; the intent is often to uncover the presumed motives of the message-maker. There is less concern with objectivity, measured by whether another researcher would content-analyze the same messages into the same categories.

Perhaps the most well-known example of critical research today is Ariel Dorfman and Armand Mattelart's (1971) ¿Para Leer al Pato Donald? (translated and published in English in 1975 as How to Read Donald Duck). These critical scholars content-analyzed Walt Disney's Donald Duck comic strip (as published in Latin American newspapers) to identify themes of U.S. imperialism toward Third World nations. These researchers implied that such content themes in the comic strip influenced its readers. In contrast, empirical scholars are usually very cautious about implying the assumption of an effect, as they believe that most mass media messages do not have strong effects (and hence that media contents do not equal effects). Critical scholars often carry out content analysis, not in order to determine audience effects, but to make inferences about the message-makers. For example, Dorfman and Mattelart (1971) conducted their content analysis of the Donald Duck comics in order to provide evidence about the imperialistic motivations of Disney Studios.

Here we see an illustration of the contrasting orientations of empirical versus critical scholars: (1) empirical researchers emphasize understanding mass communication effects on an audience, and they conduct content analysis in order to aid understanding of such effects, while (2) critical scholars emphasize understanding the control of a communication system, so they conduct content analysis in order to make inferences about the mass media institutions that create the messages. Here is an example of where empirical and critical scholars might combine their types of research to mutual advantage, such as study of a mass media institution, combined with a content analysis of the messages that it produces, and with an audience survey of these messages' effects.⁶ Dorfman and Mattelart's (1971) study might have been broadened by gathering data (1) from Disney Studios about why the cartoon strip's makers utilized the imperialistic themes that the content analysis displayed,⁷ and (2) from readers of these comics in audience surveys to determine what effects, if any, the imperialistic messages caused. Such a multi-pronged research approach is usually superior to using any single research method, but there are few such multi-method researches in social science. It is extremely rare to follow a triangulation research strategy in data-gathering methodologies, data-analysis techniques, and/or in theoretical approaches (such as utilizing both a critical and an empirical approach).

Over the past several years, I have assigned selections from Dorfman and Mattelart's (1975) How To Read Donald Duck to both undergraduate and graduate students at Stanford University and at the University of Southern California. The typical student reaction is incredulity, puzzlement, and humor. Most students simply cannot believe that Dorfman and Mattelart's analysis is for real. A few of my students become convinced that Disney comics are imperialistic. Most students read comics with a more questioning attitude after their exposure to How to Read Donald Duck. Their comics consciousness has been raised, which I suppose is exactly what the critical scholars intended.

Geography of the Empirical and Critical Schools

Are the differences between the critical and empirical schools due simply to U.S./European contrasts? There is a tendency for critical scholars to be European rather than American, and for empirical scholarship to flourish more strongly in North America than in Europe.

It is an over-simplification, however, to say that U.S. social scientists dominate the empirical school, while Europeans are

critical scholars. For example, one of the noted critical scholars is Herbert Schiller, a professor at the University of California at San Diego, and there are many other U.S. critical scholars. The empirical school is well-represented in Europe, and today there are as many empirical scholars as critical scholars in Europe. Further, there are probably more critical scholars in the United States than in Europe, although an exact count is not available.⁸

However, the intellectual leaders of the contemporary critical school are mainly Europeans: Armand Mattelart teaches at the University of Paris; Kaarle Nordenstreng is a professor in the Department of Journalism and Mass Communication at the University of Tampere, Finland; and Cees Hamelink is at the Institute of Social Studies, The Hague, Netherlands. Previously we mentioned that Jürgen Habermas, a German, is the key figure today in the second generation Frankfurt School; he is a sociologist and philosopher who gives major attention to human communication.

Similarly, there is a strong tendency for members of the empirical school to be North Americans. Nationalism obviously affects how social scientists view the world. For example, the socio-economic conditions of North America facilitated the implicit assumption of many empirical scholars that society only needs a little tune-up (this from empirical research), rather than a complete overhaul. Most U.S. members of the empirical school are turned off by the critical scholars' attacks on the U.S. for its disproportionate ownership and control of such mass media institutions as advertising agencies, magazines, and news agencies throughout the world, and for its multinational corporations that dominate the conduct of business. Nationalism is a major barrier, both psychologically and spatially, to any efforts to bring the empirical and the critical schools together.

Neither the empirical nor the critical school is dominant in Latin America today, and a kind of hybrid school may eventually develop, in which Latin American scholars draw upon the elements from both schools. The social-cultural-political conditions of many Latin American nations encourage scholars toward the critical approach. These are generally not very "happy" societies: Health and nutrition are poor, especially in rural areas and in urban slums; poverty is a very serious social problem; and the mass media are heavily oriented to urban, educated elites. Foreign-owned multinational corporations (especially U.S.) have heavily penetrated Latin nations. Under these conditions, a critical stance seems natural to many Latin American scholars as they look at their society. But many Latin American scholars also realize that they are seldom able to convince government officials or politicians to change a public policy unless they can present empirical evidence for the suggested policy change. If a synthesis of the empirical and critical approaches is to be forged, it may occur in Latin America, particularly in Brazil.

Problems of Understanding Between the Critical and Empirical Schools

Scholars in each school are convinced that their viewpoint is superior. For instance, some empirical scholars feel that critical scholars do not really do research, or at least rigorous research, and that critical scholars are not objective scientists because of their ideological position. Many critical scholars feel that empirical scholars are too busy gathering data to have time to think about its meaning and its context, that their work lacks theoretical depth, and that many empirical scholars are extremely naive about the uses to which their researches are put.

Neither empirical nor critical scholars have a very accurate perception of each other, in the opinion of scholars who have fairly extensive contact with both schools.⁹ The main reason for misperceptions of the other is a lack of close contact. The geography of the two schools is one cause of this avoidance pattern; further, the spatial separation means that many critical scholars and empirical scholars do not share a common language. They are unlikely to publish in the same journals, or to be colleagues in the same university department or research institute. Nor are they very likely to belong to the same professional association. The superior attitude of each school toward the other, especially critical scholars who direct their criticisms against empirical scholars, tends to drive the two schools apart. Intellectual antagonism and avoidance encourage a lack of understanding.

The empirical school is at present considerably larger than the critical school, whether measured in terms of the number of scholars, or of the amount of research resources. Empirical scholars have certain other important advantages over critical scholars: Almost all share the common language of English, as well as a scientific paradigm that guides much of their work. Further, the critical stance of the critical scholars means they are less likely to receive research funds or other types of institutional support from such establishment institutions as national governments, foundations, or from private firms.¹⁰ The critical school also suffers from a lack of journals and other publication outlets.

What could the two schools of research do if they wanted to understand each other better? A first step would be for each school to treat the other with more respect. The past rancor between the two schools should be replaced by a realization that each may have much to learn from the other. Pluralism (the position that all points of view deserve to be heard and considered) must prevail in national and international associations for consumer research, in their conferences, and in the journals and other publications that these associations control. Unfortunately in the past, associations, conferences, and publications have played a segmenting, rather than an integrating role.

Someday we may have critical-empirical scholars and empirical-critical scholars.

Implications for Consumer Research

The present discussion of the critical school suggests several lessons for empirical scholars of consumer behavior to consider.

1. Consumer scholars should focus on the ownership and control of systems affecting individual consumer behavior. For instance, researchers focusing on advertising effects cannot afford to ignore the nature of the mass communication system that is producing and delivering the advertisements. Who owns and controls this system, and the purposes for which it is operated, are important parts of the context, and directly aid the investigation of advertising effects. Consumer research should give greater recognition, critical scholars tell us, to the context in which consumption occurs. Contextual research ultimately means placing less reliance upon statistical analysis of quantitative data, where critical scholars feel that "rigor" is often mistaken for insight.

An illustration of the greater need for system attention, rather than an almost sole concentration on individuals as units of analysis, is research on children and television. More than three thousand publications have appeared on this topic over the past 25 years. Frequently, these studies dealt with whether violent television programs cause aggressive behavior on the part of child viewers. Other investigations have looked at the impacts on children of television advertisements for toys, candies, and sweet drinks. Generally, children were the respondents in these researches, with a few content analyses of television programs or advertisements. Almost no attention has been paid to the advertisers, ad agencies, or television systems that produce and broadcast children's television programs and advertisements. Critical scholars would urge us to investigate why such messages are produced, for whose benefit, and what alternative patterns of ownership and control might be possible. If social problems regarding children and television do exist, and if they can be identified, possible solutions must involve the television networks and the advertisers of children's products. So critical scholars are puzzled that we do not study such institutions.

2. Consumer research should be cast in a wider scope, both in recognizing (1) that research questions of global significance should be emphasized over culture-bound inquiries of national systems, and (2) that to understand consumer behavior is to understand society, as critical scholars have realized since the beginnings of the Frankfurt School. Much of our present consumer research bears a strong made-in-the-U.S. stamp. Further, this past research conveys as assumption that consumer behavior is a specialized entity or sector within society, somehow standing separate from the rest of society.

Does U.S.-style advertising create important social problems in the Third World nations of Latin America, Africa, and Asia? The

consequences of mass media advertising may include the creation of an inappropriate consumerism that is frustrating for the mass of individuals who do not possess adequate resources to fulfill their media-created aspirations. Further, advertising in the Third World may lead to increased dependence upon industrial nations like the United States for the importing of consumer products and the technologies on which they are based. Perhaps the rise of consumerism in Third World contexts has dysfunctional, as well as functional, consequences. These are policy issues of great importance to government leaders and to private business officials. Consumer scholars should not ignore them. Note that the policy debate here concerns a very broad, abstract variable, consumerism, rather than the specific types of consumer behavior that we usually investigate.

Critical scholars urge empirical scholars to adopt a more critical stance toward our field: To continually question the motives of the powerful for dealing with the weak, to stop assuming that consumer research is for the benefit of the consumer, and to realize that communication and exchange can be conceptualized as leading to a conflict situation, as well as one leading to harmony.

American and European social scientists look at social class in quite different ways. In the U.S., sociologists and many other scholars focus on socio-economic status as a very important variable (or set of variables) in their empirical studies of human behavior. American scholars have delineated and described social classes in community studies, investigated the nature of occupational prestige, and, more generally, studied the consequences of socio-economic status, such as its capacity to explain the purchase and public display of consumer products. No astute consumer researcher would fail to include social status variables in an inquiry of such consumer behavior as clothing fashion, automobile purchasing, and/or expenditures for entertainment.

On the Continent, many social scientists, especially those of a critical persuasion, also focus on socio-economic status. But they approach social class in entirely different ways. Across the Atlantic, class analysis stems from Marx, and is approached in an intellectual and conceptual way without much emphasis upon empirical data-gathering. European social scientists write extensively about class and class conflict, focussing upon inequality and exploitation. Many of these critical, theoretical writings in Europe are very interesting reading, containing useful ideas and research leads for American empirical scholars. But I can find few examples of a U.S. empirical study that has been fruitfully based upon the European critical theory of social class. One example is Eric Wright's (1981), Class and Economic Inequality. But the scholarly potential of the European, critical work on social class has not yet been realized by U.S. scholars.

3. The critical school suggests to empirical scholars of consumer behavior that they should broaden the range of methodological tools they employ in their investigations. Venkatesh (1985, p. 64) concludes his review of the epistemology of marketing with a suggestion that applies equally to consumer research: "The quest for scientific knowledge using the logical positivistic framework may have to be modified to knowledge based on understanding, or what Max Weber has called Verstehen. What is needed is a balance between explanatory-analytical modes of research and interpretive-constructive approaches to research."

I agree. Previously, we discussed the advantages of triangulating research methods. For most consumer researchers, this strategy means bringing in qualitative methods to compliment the quantitative methods in which they have been trained. Consumer research will be of greater value if our methods are broadened.

4. Ethical aspects of the consumer behavior they investigate should not be ignored by empirical scholars, even if these aspects cannot be studied with their usual research methods. Who is expected to benefit from consumer research? Consumers? The firm marketing a product? Society? Why do we not give greater attention to investigating the consumption of products like cigarettes, alcohol, and drugs, that are clearly harmful to the consumer?

The public perceives consumer research, and the broader process of marketing research to which it is related, as manipulative of consumer behavior, such as by encouraging individuals to purchase products that they may not really want. This negative

stereotype may not be entirely incorrect. For example, a recent consumer research study in Southern California found that while bank customers (who were personally interviewed as they exited banks) perceived their waiting time in the bank as double what it actually was. Customers of banks with "silent radio" (a news and captioning display service) estimated their waiting time at half what it really was. These research results influenced a large bank to install silent radio in all of its branches.

Who benefited from this piece of consumer research? Critical scholars would immediately ask this question. They want to know whose side consumer researchers are on, particularly when one side of the transaction gains and one side loses. Critical scholars would urge consumer researchers to always attend to the ethical issues raised by their research, and, more generally, to act as a conscience of society.

Jagdish Sheth (1979) has asked the question: Why have consumer scholars focused more on the implications of their research for the marketer, than for consumers or for society? One answer may be that the field of consumer research is dominated by marketing scholars, with perhaps 80 percent of the members of the Association for Consumer Research affiliated with the marketing discipline. Tucker (1974) claims that marketing scholars tend to study consumers as fisherman study fish, rather than as marine biologists study them. Marketing organizations are more likely to fund consumer research than are consumer associations. Hence our marketing orientation in consumer research. Perhaps when (and if) consumer research becomes more interdisciplinary, and if it evolves into a discipline of consumer behavior, greater attention to benefiting the consumer and society will result. Closer contact with critical scholars will have a consciousness-raising effect in such a reorientation of consumer research.

Finally, the directing of consumer research toward consumer welfare will raise the value with which society perceives consumer research. "Society tends to reserve full scientific legitimacy for those inquiry systems which are perceived to be operating in the higher interests of knowledge and general societal welfare" (Anderson, 1983). This proposition is a guideline which the critical school would urge consumer scholars to consider, and act accordingly.

Footnotes

¹Walter H. Annenberg Professor and Associate Dean for Doctoral Studies, Annenberg School of Communications, University of Southern California. The author wishes to acknowledge Byron Reeves (Institute for Communication Research, Stanford University) for originally suggesting the present topic of this paper, and Alladi Venkatesh (School of Management, University of California at Irvine), Melanie R. Wallendorf (Department of Marketing, University of Arizona), and Paul F. Anderson (Graduate School of Business Administration, Harvard University) for their comments on a previous draft. I have also benefited from Steffy and Grimes' (1986) call for the application of critical theory to organizational research. The present paper continues, and draws directly upon, my previous writing about the empirical and critical schools of communication research (Rogers 1981, 1982, and 1985).

²Relativism is a philosophy of science that asserts there is no single scientific method; instead, scientific knowledge claims depend on the particular beliefs, methods, and ways of thinking of scientists (Anderson 1986).

³Semiotics is the analysis of signs as meaning-producing messages.

⁴An authoritative account of the Frankfurt School is provided by the historian Martin Jay (1973), and its theories are reviewed by Arato and Gebhardt (1978). A carefully reasoned critique of the critical school is provided by Fejes (1985, pp. 517-530).

⁵Social class struggle was an important concept for early critical scholars in understanding society, although this concept (1) has undergone substantial revision by Habermas (1976, pp. 130-177) in recent years, and (2) always was much more important for orthodox Marxist scholars than for critical scholars.

⁶Just such a research design is utilized in the many investigations of the agenda-setting process through which the mass media establish the priority with which an audience perceives various news topics.

⁷Given the attitude of Disney Studios toward ¿Para Leer al Pato Donald? including legal action to prevent its publication in English in the U.S., it is doubtful that they would have provided much information about their motivations for message-making, at least to Dorfman and Mattelart.

⁸In recent years, the vitality of the critical school in the United States is evidenced by the launching of a new journal, Critical Studies in Mass Communication, by the Speech Communication Association in 1984; and by the founding of the Union for Democratic Communication in 1981, with about two hundred members and seven local chapters, and an annual convention.

⁹For example, Lang (1979) points out that the critical school is incorrect in viewing the empirical communication research school as "the product of commercially-supported media research cultivated and exported from the U.S.A." Lang reviewed the history of the empirical school to show (1) that the empirical tradition is as much a German as an American phenomenon, and (2) that the empirical school developed as much as a response to broad intellectual, social, and political interests as to the demands of media organizations operated for profit.

¹⁰As Halloran (1981, p. 29) noted: "Critical research, or at least much of it in many countries, has to survive in what is inevitably a hostile atmosphere."

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Abstract

The concept of knowledge-as-constructed is described and a method of measurement is presented which represents its contingent character. An application to consumer knowledge of the health implications of food is presented.

Introduction

The modeling of belief or knowledge has a long history. It includes early attempts to model extensive domains such as Abelson and de Solla Pool's (1965) model of the 1960 presidential election voter and Abelson's (1973) model of the beliefs of Barry Goldwater, or more limited domains such as the mind of the restaurant user (Shank and Abelson, 1977). Some models take a complex view of knowledge as a map of causes (Bougon, Weick and Binkhorst 1977) or propositions (Lindsay and Norman 1977), while others, such as those in the tradition of perceptual mapping, merely seek to model the similarity aspect of object knowledge.

The issue is currently a lively one in consumer research. Knowledge content and structure have been implicated in many consumer phenomena: in the selection and encoding of new knowledge (Johnson and Russo 1984, Taylor and Crocker 1980), in information search (Punj and Staelin 1983, Bettman and Park 1980), and in information retrieval during choice or problem solving (Sternthal and Craig 1982, Srull 1986). The ability to identify and represent what consumers know about a market simply and efficiently is, clearly, a desirable measurement skill.

It is important to be specific in using the term knowledge. It can be used quite broadly, as Shank (1980) does when he defines it as that which is necessary to operate successfully within a system. In that sense a sunflower might be said to "know" where the sun is. In this paper, a narrower sense is meant. A distinction can be made (Anderson 1976, Ryle 1944) between propositional knowledge (relating to the properties of objects, concepts, or events) and procedural knowledge (embedded in behavior and relating to rules of action or conduct). Our concern is with declarative knowledge - the knowledge consumers can supply when questioned. It is also important to specify whether the concept to be measured is knowledge-in-memory or knowledge-as-constructed. The content of memory is the concept implicated in much research in information processing, but it is not the topic of this paper. We are concerned with the sum of what is in memory and what the subject can readily construct by inference operating on the contents of memory: the product of a computational, as distinct from retrieval, process (Brucks and Mitchell 1981, Dacin and Mitchell 1986, Wyer and Srull 1985).

Why measure this concept? Unlike knowledge-in-memory, which is usually found as a mediating concept in accounts of consumers' cognitive processes, ours is an indicator of an initial or terminal state. Change in knowledge-as-constructed (within subjects) can reveal that a knowledge-altering process such as learning or persuasion has occurred, and differences in knowledge (across subjects) can reveal differences in what consumers know in different segments of the market.

A representation is necessarily approximate: it must be parsimonious both in what it requires of the data collection task and in what aspects of the phenomenon are selected for inclusion in the representation. The aspects of knowledge which might be taken as important (listed in what we speculate to be the order of their accessibility to the modeller) are:

- * The objects of knowledge that populate the domain.
- * Relations of similarity among the objects, including their hierarchical (categorical) structure.
- * Relations of dominance (e.g. preference) among the objects.
- * Attributes and properties of the objects.
- * Relations of contingency among the attributes, including their hierarchical (subset-superset) structure.
- * Relations of causality among the attributes.

This paper describes a method of collecting and summarizing consumer knowledge with respect to the first five aspects. The method is similar to that employed in D'Andrade's (1976) analysis of U.S. beliefs about illness. The structure which it produces is an alternative to a positioning map, which represents only the first four aspects. The innovation here, by comparison with maps of perception and preference, is to be able to show that some attributes are subordinate to, or contingent on the presence of, others.

To illustrate this distinction, consider that a positioning map can record that a subject knows that, in the domain of animals, possession of feathers and ability to fly are strongly associated. However such a representation cannot identify whether the subject believes that feathered animals are a subset of flying animals, or that flying animals are a subset of those with feathers, or in fact that bats and ostriches make it impossible to specify any hierarchical relation at all. A representation that reveals contingency can be said to have generative capacity. It can predict the answers a subject would give to new questions, and responses to new objects.

Background to the Study

The aim of this study was to represent and contrast two "ideologies" regarding diet and health. We wanted to examine how the beliefs of a group of health food consumers differed from those of a group who had been converted from this pattern of beliefs to those espoused by a rather more radical nutritionalist, Nathan Pritikin (1979). Three subjects in the study held a pattern of beliefs which we took to be representative of the patrons of health food stores. They were concerned about good nutrition and avoided junk foods. They expressed a preference for vegetable oils over animal fats, and nuts and whole grains over sugary snacks. Two other subjects had previously held similar views, but had been influenced by the writings of Pritikin. He challenges some of the tenets of health store dogma. Specifically, Pritikin proposes cutting back all fat intake, whether vegetable or animal, and claims that most people eat more protein than they need. Many conventional health foods, such as nuts, cheese, and soybean products, are held by Pritikin to be either unnecessary or harmful to health.

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All five subjects were demographically similar: middle income American women aged 30-45 with families. Their backgrounds too were similar, and it should be acknowledged that they were chosen for similarity of values to minimise problems of aggregation.

EXHIBIT 2
Sentence Frames

1. Unhealthy
2. Healthy
3. Something I eat often
4. Something I occasionally eat
5. Something I never eat
6. Can supply complex carbohydrates
7. Can supply simple carbohydrates
8. Fattening
9. Can supply quick energy
10. Can supply vitamins
11. Can supply protein
12. Can supply fiber
13. Contains vegetable oils
14. Contains animal fats
15. Tastes good
16. Tastes unpleasant
17. Poses risk for heart
18. May be linked to cancer
19. Found in health food stores
20. Contributes to growth
21. Should be cooked
22. Must be eaten raw
23. Natural product
24. Contains questionable additives

The contrasting beliefs of these two groups could have been shown by collecting ratings of propositions such as the health value of specific foods, or by mapping perceptions and preferences of the items. These analyses, however, would have said nothing about differences between the groups due to differences in the hierarchical or contingent structures of their ideologies.

Objects and Propositions

The first problem posed by the task of representing knowledge is to define the domain to be represented. Some exogenous rule, in this case "knowledge about diet and health," implies a set of objects, in this case foodstuffs, about which subjects have propositional knowledge. The semantic content of the terms was captured by using the sentence frame method (D'Andrade, 1976). A sentence frame is an open proposition which designates properties that subjects hold to be true, false, or inapplicable for each term. An example of a sentence frame is the statement, "It is important to eat a little/some _____ every day."

Both the objects of knowledge and the sentence frames were selected from a large number of statements about diet and health offered by subjects in informal interviews. Interviewer judgment was used to choose object terms and sentence frames which seemed to be well understood by all subjects and which spanned the semantic domain. Thirty object terms and 30 frames were entered into the quantitative phase of the analysis.

In the quantitative phase, each subject was shown each sentence frame and, with each object inserted in succession into the blank space in the frame, was asked to agree or disagree with the resulting proposition. A matrix of 30 objects by 30 frames resulted, in which agreement was coded 1 and disagreement or inapplicability were coded 0.

The aim of the study was to record consensual knowledge within each of the two groups. We wanted, therefore, to use only terms and frames whose meanings were shared across both groups, and we discarded objects on which respondents disagreed, or frames which failed to show differentiation among objects, based on row and column variances. Exhibits 1 and 2 showed the 23 objects and 24 frames which were retained for further analysis.

EXHIBIT 1
List of Food Terms

- | | |
|----------------------|-------------------|
| 1. Boiled egg | 13. Roast beef |
| 2. Milk | 14. String beans |
| 3. Cream cheese | 15. Grapefruit |
| 4. Soybeans | 16. Ketchup |
| 5. Granola | 17. Potato chips |
| 6. Fresh fish | 18. Cauliflower |
| 7. Molasses | 19. Pizza |
| 8. Honey | 20. Candy |
| 9. Sunflower seeds | 21. Smoked meats |
| 10. Wholewheat pasta | 22. Peanut butter |
| 11. Yoghurt | 23. Chickpeas |
| 12. Tofu | |

Relations of Contingency

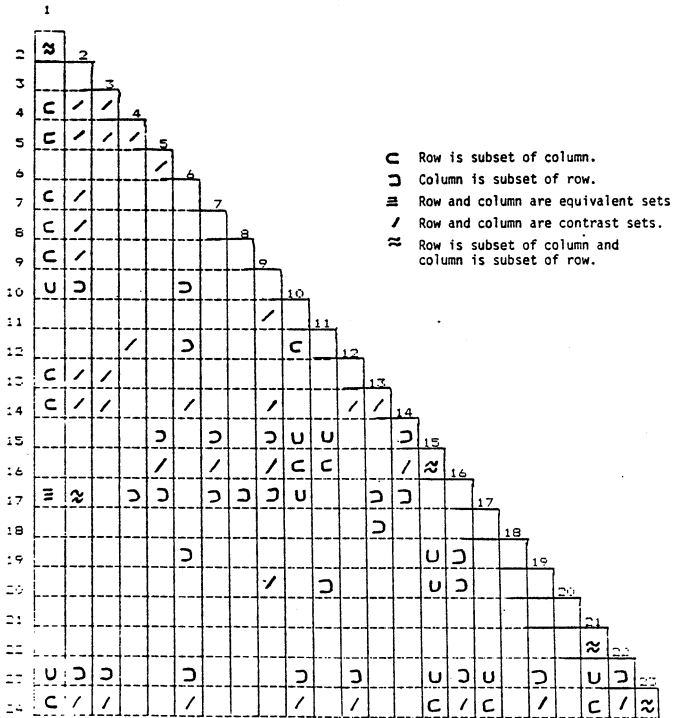
The contingent nature of beliefs is revealed by the pattern of entries in the contingency tables constructed from all possible pairs of sentence frames. The subset-superset structure of properties is indicated by contingency tables in which one or more cells is empty, and six such tables are possible. Their patterns, and the implications of each, are given in Exhibit 3.

EXHIBIT 3
The Six Possible Contingency Table Forms
which are Significant and Contain One or More
Empty Cells

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0	B	1									
0	x	x									
1	x	x									
<table border="1" style="border-collapse: collapse; width: 40px; height: 40px;"> <tr><td style="text-align: center;">0</td><td style="text-align: center;">B</td><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">0</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td></tr> <tr><td style="text-align: center;">1</td><td style="text-align: center;">x</td><td style="text-align: center;">x</td></tr> </table>	0	B	1	0	x	x	1	x	x	$A \subset B$ and $B \subset A$	If an object is A, then it is not B and if it is B, then it is not A and if it is not A, then it is B and if it is not B, then it is A.
0	B	1									
0	x	x									
1	x	x									

Among the 276 two-by-two contingency tables constructed within each group of subjects from all possible pairs of sentence frame properties, were many tables with zero cells. Exhibit 4 shows, for the group of Pritikin ideologues, the set dependencies among the frames in the form of a lower-half matrix.

EXHIBIT 4
Dependencies Among Sentence Frames



This matrix can be reduced further in several ways. First, equivalence relations permit pairs of properties to be replaced by single properties, since what is true for one element of the pair holds for the other, too. Second, where transitivity exists in subset-superset relations, the number of relations which have to be portrayed in the representation is limited to the principal ordering.

Graphical Presentation

Exhibits 5 and 6 show knowledge structures for Pritikin believers and health food store patrons respectively. They depict ordered nets in which the subset-superset structure of food terms is indicated by arrows running from subordinate to superordinate members. Terms always belong to classes above them to which they are connected by an arrow.

Superficially, the structures look quite different. The Pritikin group classify the target foods into two sets without overlapping membership: a set of unhealthy foods and a natural set. For the health food group there are also two sets, but they are not mutually exclusive: the respondents are not as extreme in their typing of foods, and allow more exceptions. Animal fats, in particular, bridge the gap between good and bad for this group. They are associated with heart risk but also with growth of young bodies.

There are, however, many similarities apparent in the structures. Both groups are suspicious of foods which taste good, so that the gross structure in both cases reveals unhealthy/good-tasting foods as one organizing concept and naturalness as another. The health food group classifies relatively few foods as unhealthy. Even foods seen as heart risks are not all termed unhealthy. Consequently unhealthiness cannot be a superordinate concept, nor can its contingencies be clearly revealed. The Pritikin group has a much larger category of unhealthy foods, and a more comprehensive "theory" of the sources of unhealthiness is thus revealed. This structure of beliefs parallels almost precisely its beliefs about the determinants of good taste.

Pritikin's doctrine, as it is revealed in this analysis, is an account of the roots of unhealthy diet. Health food dogma, by contrast, has more to say about healthiness. While several sub-structures, such as naturalness, health food stores, and the contribution of protein to growth, are similar in the two representations, the subordinate position of "healthy" in the Pritikin responses, and its superordinate position in the health food responses, is a clear point of difference.

We have been treating these maps as representations of implicit theories of food in general. Another way to use them is as guides to the meaning of specific food items - to examine the contingent beliefs associated with one food item at a time. For example, differences in the meaning of tofu between conventional health food consumers and those influenced by Pritikin's teachings may be inferred by comparing the paths in which the item is implicated. For the health food group, tofu is a healthy product, similar in many respects to desirable foods, but rejected simply because of taste. If its flavor could be changed, it might be liked. (Think, for example, of Tofutti.) For the Pritikin group the product is emmeshed on the wrong side of the structure. It is associated with vegetable oil (it is made of soybean curd) and its rejection is based on a web of related beliefs which would each have to be altered before it could be regarded as healthy.

The study supplies some tentative evidence of the method's reliability. Individual measures of the structure of knowledge for members of each of the two ideological groups were constructed, and did not differ materially from the aggregate measure. Thus the method was not unreliable across subjects in this test. The more important question, however, is whether another researcher, working independently, would have found the same structures as this investigator found. Although the choice of objects and frames is clearly subjective, there is little reason to suspect that the method is not objective beyond that point.

It must be emphasized, however, that the representation is a function of the objects in the stimulus set. Some relations of contingency hold only for the objects presented to the subjects, and exceptions capable of voiding some of the dependencies would not be hard to find. Only as the size of the object set approached the population of all possible objects would the representation become valid, but the data collection task would have become intolerable long before then.

The method requires categorical judgments from the respondents. They must decide whether an object does or does not belong in a sentence frame. The method cannot cope with subjects who are uncertain or believe the proposition holds only some to the time. This problem may not be as serious as it seems. By appropriate wording of the sentence frame, by adding "usually" or "I think", most scaled responses can be made categorical. On the positive side, the respondent's task is considerably simplified by the fact that the interviewer seeks categorical rather than interval scaled or probabilistic responses.

EXHIBIT 5
Contingent Structure of Knowledge for Pritikin Group

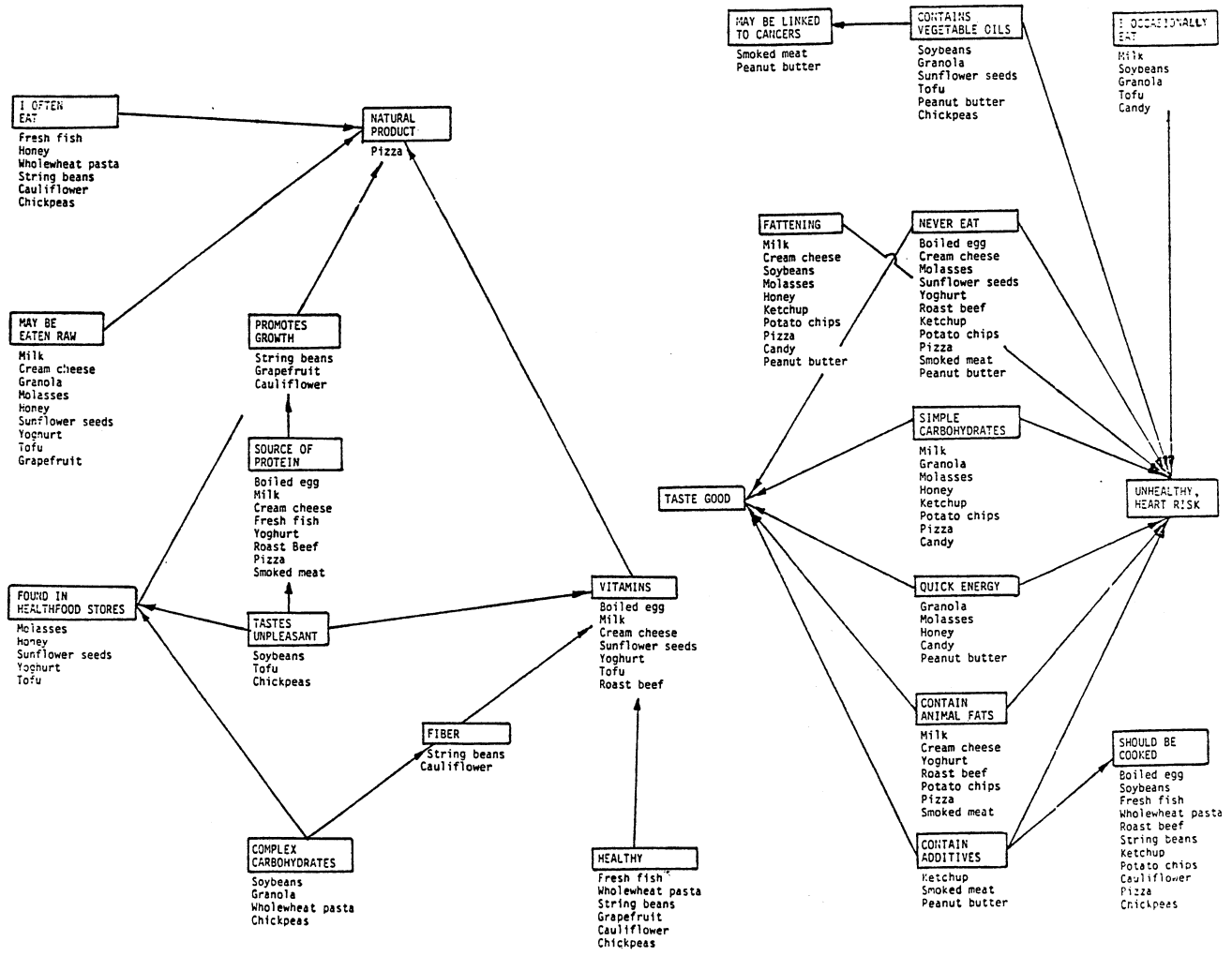
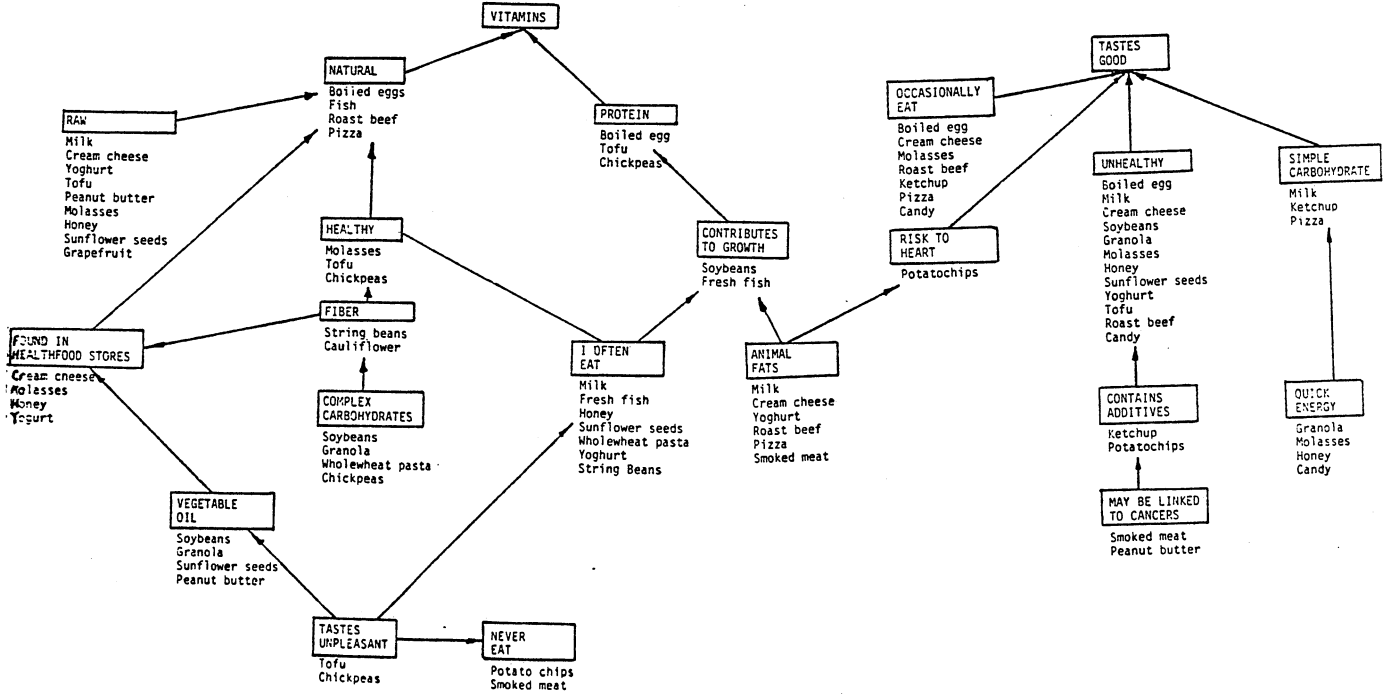


EXHIBIT 6
Contingent Structure of Knowledge for Health Store Group



Conclusion

This paper has presented a methodology for representing what consumers know (or can easily infer, because this is a representation not of memory but of knowledge) about a domain. The method has several attractive features. The data collection task is not very demanding, involving a series of categorical judgments. Analysis is objective and straightforward. While the resulting representation is more complex than say a mapping of similarity or dominance data, the display reveals contingency as well as proximity.

The method is proposed as an indicator of learning, or of knowledge differences among consumer segments, in academic consumer research and in applied studies of persuasion and influence. Its validity for these purposes remains to be established. This study did no more than report some evidence of face validity: subject groups with known differences in ideology yielded knowledge structures which were different in plausible ways. It will be necessary to investigate whether this indicator converges with other measures of learning or knowledge to establish its worth more solidly.

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EXPLORING THE STRUCTURAL CHARACTERISTICS OF CONSUMERS' KNOWLEDGE¹

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Richard Celsi, University of South Carolina
Jerry Olson, Pennsylvania State University²

Abstract

The knowledge structures of more and less knowledgeable subjects were examined in terms of three characteristics: dimensionality, articulation, and abstraction. Compared to the less knowledgeable subjects, the knowledge structures of the more experienced, more knowledgeable subjects had more dimensions, were more articulated, and contained more concrete level knowledge. The two groups also differed in the content of their knowledge dimensions. Suggestions are offered for future research on consumers' knowledge structures.

Introduction

By the late 1970's, consumer researchers had begun to recognize that consumers' stored knowledge in memory strongly influences their cognitive processes (Bettman 1979; Olson 1978.) Prior knowledge has been shown to affect speed of pattern recognition (Chase and Simon 1973), recall (Arkes and Freedman 1984; Reder and Anderson 1980), information acquisition (Chiesi, Spilich and Voss 1979), information search (Brucks 1985; Biehal 1983; Johnson and Russo 1984; Punj and Staelin 1983; Srull 1983), information processing strategies (Sujan 1985; Fiske, Kinder and Larter 1983), and memory organization (Sujan 1985; Alba and Hasher 1983; Fiske et al. 1983; Chi, Feltovich and Glaser 1981). In addition, more knowledgeable individuals are able to make finer discriminations between objects within a domain, as well as combine information into larger meaning units or chunks (Showers and Cantor 1985; Markus, Smith and Moreland 1985). In sum, this literature suggests that more knowledgeable "experts" have greater amounts of knowledge and better-organized structures of knowledge than do less knowledgeable individuals or "novices." These more complex knowledge structures, in turn, produce more accurate and efficient information processing (Showers and Cantor 1985).

Rather than measure the content and structure of subjects' knowledge, however, most researchers have merely assumed that certain subjects have different types and amounts of knowledge in their memories because of variations in the type and amount of their past experiences. Therefore, subjects are often blocked on their past experience--more vs. less--as a surrogate for the extensiveness or complexity of their domain specific knowledge.

Next, researchers predict the information processing consequences of these presumed differences in knowledge structures for these more and less experienced subjects (cf. Markus and Sentis 1982; Markus et al. 1985; Sujan 1985). Then, any observed differences in processing outcomes between the two groups are attributed to differences in their stored knowledge. However, researchers seldom take direct measures of the content and organization of the knowledge structures that presumably cause the observed effects. In fact, subjects' actual knowledge has been directly measured in only a few studies (see Chi et al. 1981; Conover 1982; Dacin and Mitchell 1986; Hirschman and Douglas 1981; Kanwar, Olson and Sims 1981).

In sum, almost all of the expert/novice research has focused on the "cognitive consequences" produced by subjects' knowledge. Most researchers have ignored the mediating knowledge structure. Thus, we have only a limited understanding of the specific characteristics of knowledge structures that may be responsible for the observed processing differences between more and less knowledgeable subjects. In addition, little attention has been directed toward developing general theoretical explanations for these knowledge effects. Compared to novices, experts are said to have more "well-developed, extensive, efficient, or enriched" knowledge structures. But the specific characteristics of an extensive or efficient knowledge structure have not been specified. A first step in doing so is to carefully describe the differing content and organization of knowledge structures possessed by relative experts and novices.

In this study, we build on the research of Kanwar, Olson and Sims (1981) and Dacin and Mitchell (1986). We describe how three characteristics of knowledge structures--dimensionality, articulation, and abstraction--differ for more and less knowledgeable subjects. These aspects of knowledge may be responsible for some of the processing consequences reported in the "expert/novice" research literature. This type of descriptive data should be useful in developing a theory of consumers' knowledge, especially the structural characteristics of knowledge that may underlie expertise effects.

Characteristics of Knowledge Structures

Several researchers (Bieri 1955, 1966; Conover 1981; Hirschman and Douglas 1981; Kanwar, Olson and Sims 1981; Scott 1963, 1967, 1974) have described characteristics of knowledge structures, including the three basic features examined here: dimensionality, articulation, and abstraction. In this section, we briefly describe these constructs and discuss the relevant literature concerning their effects.

Dimensionality

Dimensionality refers to the number of unique (different) attributes or concepts in a person's knowledge structure for a particular domain (Kanwar, Olson and Sims 1981; Scott 1963). The dimensions people use in thinking about a domain are acquired through their experience with the domain. Because experts or more knowledgeable people have had greater experience in a domain, they should be able to describe objects in that domain in terms of more dimensions than novices or less knowledgeable individuals can.

The expertise literature generally supports the proposition that the knowledge structures of more knowledgeable individuals have greater dimensionality. For instance, Scott (1967) suggested that more dimensional or cognitively complex individuals are able to construe social behavior in terms of many dimensions. Mitchell and Chi (1986) found that experts had much more knowledge about a domain than did novices. Markus, Smith and Moreland (1985) observed that experts were able to categorize and interpret an object in many different ways. Finally, Showers and Cantor (1985) noted that highly knowledgeable individuals were quite flexible in how they processed information within a domain, presumably because of the greater dimensionality of their knowledge structures.

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² The authors are doctoral candidate in Marketing, Assistant Professor of Marketing, and Professor of Marketing and Binder Faculty Fellow, respectively.

Articulation

A dimension is more articulated if a person can make more (finer) discriminations along that dimension. For example, if we assume that a Likert scale represents a knowledge dimension in memory, the number of divisions or categories on that scale--perhaps three, five or seven points--is analogous to the level of articulation. The articulation of an entire knowledge structure is indicated by the average number of reliable distinctions that a person makes across the salient dimensions in memory (Bieri 1966; Kanwar, Olson and Sims 1981; Scott 1966). Due to their greater experience in applying dimensions to objects in a domain, more knowledgeable individuals should be able to make finer distinctions between stimuli in terms of their salient dimensions. In contrast, less experienced individuals are likely to possess less articulated knowledge structures.

Experts' ability to make finer discriminations among objects than novices has been supported by the growing literature on expertise. According to Murphy and Medin (1985), experts differ from novices primarily in their ability to make finer distinctions between things. This difference between experts and novices was first recognized by Rosch et al. (1976) when studying the categorization processes. Markus et al. (1985) also distinguished experts by their ability to divide information "into exceedingly small units," whereas novices tend to use more general and common categories. Markus, Hamill and Sentsis (1979) suggest that the differences between schematics and aschematics in self-categorization tasks are due to differences in the relative articulation of their knowledge structures. In sum, the ability of more knowledgeable persons to make fine discriminations between things, remember more detailed information, and process new information more efficiently seems due in part to their more articulated knowledge structures.

Abstraction

Abstraction may be the most important characteristic of knowledge structures that differentiates experts from novices. Abstraction refers to the level of inclusiveness of the salient concepts or dimensions in a knowledge structure. More abstract concepts are "bigger," "broader," more general, and less representative of tangible "reality." In contrast, less abstract, more concrete concepts are "smaller," more "narrow," more specific, and more directly representative of physical objects in the environment.

The development of knowledge structures containing abstract concepts was described by Hayes-Roth (1977). According to her unitization theory, a knowledge structure begins as a few, weakly associated concepts. With experience, more concepts are acquired and sets of concepts become more closely associated with one another. Thus, they tend to be activated together. As experience grows further, the person begins to form more abstract representations of these sets of interrelated concepts. For instance, the concepts "nutritious," "vitamins," and "protein" might be recoded to form a more abstract memory concept, "good for you." As knowledge structures become more abstract, concrete knowledge is organized or chunked into fewer, but more general, abstract concepts. In general, then, we would expect increasing levels of experience or knowledge to produce more abstract knowledge structures.

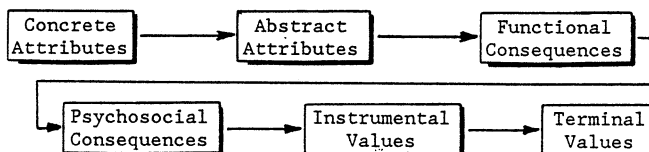
Many findings in the expert/novice literature suggest that experts have more abstract knowledge than novices. Markus et al. (1985) suggest that experts tend to chunk or group knowledge to form more abstract dimensions. Consequently, more experienced people should be able to integrate new information with previously acquired knowledge more easily than novices. Research on the categorization processes of experts and novices has demonstrated that "experts" possess knowledge at several interrelated levels of abstraction. Their abstract knowledge allows them to organize seemingly different stimuli by some general principles or features (Murphy and Wright 1984). On the

other hand, "novices" tend to categorize objects based on less abstract, more sensory-level features. Other researchers have suggested that, compared to novices, experts use fewer, more inclusive, more abstract concepts (Chi et al. 1981) and have knowledge concepts that subsume more information (Fiske, Kindler and Larter 1983).

However, knowledge research also suggests that more knowledgeable individuals have substantial concrete knowledge, as well as more abstract knowledge (Showers et al. 1985; Markus et al. 1985). For example, Conover (1982) found that more experienced subjects used many more concrete or specific attributes when describing a domain than did less familiar subjects.

This idea that more knowledgeable individuals have more concrete as well as more abstract knowledge is consistent with the purpose of the abstraction process discussed by Rosch (1975). Abstract knowledge structures develop out of the need for cognitive economy. Because experienced consumers have relatively more knowledge dimensions, they have a greater need to form abstract categories to organize this information and increase their processing efficiency. In essence, experts have more abstract knowledge because they have a larger base of concrete, specific knowledge. Thus, the knowledge structures of more experienced individuals are likely to contain more concrete knowledge as well as more abstract knowledge.

Levels of Abstraction. Several researchers have developed conceptual schemes that classify consumers' product knowledge in terms of its level of abstraction (Cohen 1979; Geistfeld, et al. 1977; Gutman 1982; Hirschman 1980; Lancaster 1976; Myers and Shocker 1979). Means-end chains provide the most theoretically elaborate conceptualization of the abstraction of consumers' product knowledge (Gutman 1979 1982; Reynolds and Gutman 1984; Olson and Reynolds 1983). The means-end chain model includes six levels, ranging from concrete attribute knowledge to the abstract level of self knowledge:



Concrete attributes such as size or color are relatively direct, unidimensional representations of physical, tangible product characteristics. Abstract attributes such as style or quality are further removed from physical characteristics and tend to subsume several concrete attributes. Product-related concepts at higher levels of abstraction reflect the functional consequences (often tangible) of product use, such as lose weight or save money. Psychological or social consequences, such as feel good or attract attention, constitute even more abstract meanings associated with the product. Finally, at the highest levels of abstraction, consumers can represent a product in terms of the values and basic needs that are achieved through its use, such as self-esteem or happiness. Note that these valued end-states are several levels more abstract than the level of physical product attributes. The abstraction coding scheme used in this research is based on this means-ends conceptualization of knowledge.

Methods

Research Objective

The purpose of this research was to describe the differences in knowledge structures between more and less knowledgeable consumers. In particular, we were interested in differences in the dimensionality, articulation and abstraction of their knowledge structures for nutrition.

Subjects

Subjects were 40 undergraduate students at a large university, selected on a convenience basis. Subjects volun-

teered to participate and were paid \$4.00 for the approximately one hour of their time required to produce the data discussed here.

Because we were interested in the nutrition knowledge structures of more and less experienced individuals, we selected 20 senior nutrition majors (more knowledgeable or "expert" subjects) and 20 senior non-nutrition majors (less knowledgeable or "novice" subjects). Each nutrition major had taken from 4 to 6 advanced nutrition courses, while none of the other majors had taken a nutrition course. Of course, like most adults in the U.S. society, the nonnutrition majors did have some knowledge about nutrition. The key difference between the groups was the amount of their formal classroom training concerning nutrition.

Procedures and Measures

Kelly's (1955) repertory grid task, as modified by Kanwar, Olson, and Sims (1981), was used to provide relatively direct measures of dimensionality, articulation, and abstraction. The forty subjects were interviewed individually by a trained interviewer. Each subject was shown ten sets of three food concepts, one triad at a time. For example, eggs, cheese, and peanut butter comprised one triad; yogurt, ice cream and milk formed another; sugar cookies, pretzels, and potato chips comprised another triad. For each triad, the subject was asked to describe "all the ways in which two of these foods are similar, and different from the third." After a subject had elicited all the dimensions he/she could think of, the next triad was presented, and so on.

Dimensionality. Our focus in this research was on nutrition knowledge structures. Therefore, we first separated the nutrition-related concepts from the non-nutrition concepts. Then, we computed a measure of dimensionality by counting the total number of unique nutrition concepts elicited by each subject across all ten triads. That is, a unique nutrition dimension was counted only once, even if it was mentioned several times by a subject.

Articulation. Following the triad elicitation task, the interviewer asked the subject to rate each elicited nutrition concept in terms of its importance to them (1 to 5 scale; unimportant to very important). To keep the interview at a reasonable length, the four most important nutrition concepts were selected for the next step. For each dimension, subjects were told to sort a set of food concepts (the 30 foods used in the triads--eggs, cheese, yogurt, pretzels, etc.) into piles so that the foods in each pile were similar with respect to that nutrition dimension and different from the foods in the other piles. They were told to use as many or as few piles as they wanted. We computed the average number of levels/piles across the four dimensions as a measure of articulation.

Abstraction. The abstractness of subjects' knowledge structures was measured by classifying the unique nutrition dimensions according to the six levels of the means-end chain conceptualization of knowledge discussed above. The two judges who coded the unique nutrition concepts agreed on 86% of their classifications. Discrepancies were resolved by a third judge.

Across both experience groups, we found that most (91%) of the nutrition concepts were in the three least abstract levels--concrete attributes (31%), abstract attributes (50%), and functional consequences (10%).³ The remaining concepts (9%) were psychosocial consequences, instrumental values, or uncodable thoughts. No terminal values were elicited from subjects. In sum, concepts at the most abstract levels of the means-end chain were not produced by the triad procedure. Therefore, our analysis of the relative abstractness of the knowledge structures for more

and less knowledgeable subjects is limited to comparisons at the least abstract levels of knowledge--concrete attributes, abstract attributes, and functional consequences.

Results

The purpose in this research was to describe and compare the knowledge structures of more and less knowledgeable individuals in terms of three characteristics: dimensionality, articulation, and abstraction.

Dimensionality

Dimensionality was measured by the total number of unique nutrition concepts elicited by the ten triads of food concepts. As we expected, the knowledge structures of more knowledgeable subjects had greater dimensionality (more unique nutrition concepts) than those of the less knowledgeable subjects (30.9 versus 22.2 unique nutrition concepts per subject; $F_{1/38} = 11.35$, $p < .01$).

Articulation

Articulation was measured by the average number of discriminable levels per nutrition concept produced during the free sort task. Although the more knowledgeable subjects averaged somewhat more categories per nutrition concept than did the less knowledgeable subjects (3.98 vs. 3.45 categories), the difference was not statistically significant ($F_{1/38} = 2.30$, $p = NS$).

Abstraction

The abstractness of subjects' nutrition knowledge structures was measured in terms of the six levels of the means-end chain model, as described above. The two experience groups differed only in terms of the concrete attributes elicited. More knowledgeable subjects produced substantially more concrete attribute dimensions than did less knowledgeable subjects ($X = 11.90$ versus 4.65; $F_{1/38} = 42.29$; $p < .01$). Although in the expected direction, differences between higher and lower knowledge subjects in abstract attributes (14.00 versus 12.65) and functional consequences (3.44 versus 2.68) were not statistically significant (p 's $> .05$).

Differences in Salient Knowledge Dimensions

Table 1 presents the nutrition dimensions most frequently identified as important by the more and less experienced subjects. The more knowledgeable subjects tended to use somewhat technical knowledge dimensions in distinguishing between food concepts, whereas the less knowledgeable subjects tended to use general, rather abstract attributes or functional consequences. For instance, the largest differences between groups emerged on two dimensions, "good for you" and "nutrition content." Fifteen out of 20 (75%) of the less knowledgeable subjects said that "good for you" was an important concept, whereas only 15% of the more knowledgeable subjects mentioned "good for you" as important. Conversely, 18 of the 20 higher knowledge subjects (90%) mentioned "nutrition content or value," "nutrient content," or "nutrient density" as being important. Only 9 out of 20 (45%) of the lower knowledge subjects elicited these concepts. Higher knowledge subjects also mentioned fat and fat content and vitamins more frequently than did the lower knowledge subjects. As one would expect, these data indicate that the more knowledgeable subjects (several formal nutrition courses) think about foods in terms of specific, nutrition-related concepts. In contrast, less knowledgeable subjects tend to use more general, abstract concepts.

Table 1 also shows that several knowledge dimensions are shared by the more and less experienced subjects. It is possible, though, that the meanings of these shared dimensions may be quite different for the two groups of subjects. For example, both more and less knowledgeable subjects may mention that "nutrition content" is an important dimension of knowledge. However, more knowledgeable subjects might know that "nutrition content" is important

³ Conover (1982) also reported obtaining more concrete level knowledge using a different version of the repertory grid procedure.

TABLE 1
NUMBER OF SUBJECTS MENTIONING
SPECIFIC NUTRITION CONCEPTS

Nutrition Concepts	Level of Experience		Total
	More (n=20)	Less (n=20)	
Nutrient/nutrition content			
Nutrient density	18	9	27
Protein	11	10	21
Good for you	3	15	18
Fat/Fat Content	6	4	10
Vitamins/Needs	8	2	10
Calories	4	5	9
Natural Foods/Ingredients	2	5	7
Fiber	2	2	4
Health/Healthful	2	2	4
Enriched	3	0	3
Fresh/Fresh Foods	0	3	3
Processed Foods	2	1	3
Salt	0	3	3
Sugar	1	2	3

because it helps build and maintain strong bones and tissue, provides energy, maintains health, and allows the person to enjoy and live a long life. In contrast, less knowledgeable subjects may believe that "nutrition content" is important, but know little about its consequences. To really understand the meaning of salient dimensions, we need to identify the other concepts with which it is associated. Measuring such chains of associated meanings (means-end chains) requires a more directed interview procedure like laddering (cf. Gutman 1982; Olson and Reynolds 1983).

Discussion and Future Research

In this research, we compared more and less knowledgeable (more and less experienced) subjects in terms of three characteristics of their knowledge structures--dimensionality, articulation, and abstractness.

Dimensionality

As expected, we found that the knowledge structures of more knowledgeable subjects were more dimensional than those of less knowledgeable subjects. These results are consistent with a number of studies described earlier, including Conover's (1982) findings, as well as predictions made by Kanwar et al. (1981) and Hirschman et al. (1981) that more knowledgeable subjects activate and use more dimensions than less knowledgeable subjects do.

Articulation

We also found a slight, but not statistically significant, tendency for more knowledgeable subjects to have more articulated knowledge structures than less knowledgeable subjects. Several researchers (cf. Bieri 1963; Scott 1974) have indicated that more "cognitively complex" individuals should have more articulated knowledge than less

cognitively complex individuals. Likewise, more knowledgeable subjects about nutrition would be expected to have more articulated knowledge structures than less knowledgeable subjects.

Our restricted focus on only the four most important dimensions for each subject may have partially caused the small differences in articulation we observed. Since our lower knowledge subjects did have some nutrition knowledge, their four most important dimensions might have been about as well articulated as those of the higher knowledge subjects. Perhaps if we had examined a wider range of more and less important dimensions, we might have found larger differences in articulation. Future research should take pains to select subjects who evidence even greater differences in experience and/or expertise.

Abstraction

Compared to the lower knowledge subjects, we found that the higher knowledge subjects elicited more concrete knowledge (the three lower levels of the means-end chain model). However, these differences were statistically reliable only for the concrete attribute level. These results are consistent with much of the expertise literature described earlier. Note, however, our finding that subjects elicited few abstract concepts does not necessarily indicate that they had no abstract knowledge in memory. Rather, these data may reflect the tendency of the triad elicitation task to activate relatively concrete knowledge. Other procedures such as laddering (Gutman 1982) may be necessary to produce more abstract levels of knowledge in order to differentiate between the knowledge structures of more and less experienced subjects.

We also found that abstract attributes were the most frequently mentioned level of knowledge (50% of all elicited dimensions) for both the more and less knowledgeable subjects. This suggests that abstract attributes may be the "basic" category level shared by most people (cf. Rosch 1975 1978). These data further imply that consumers' begin to develop their knowledge structures at the abstract attribute level. For instance, knowledge at the abstract attribute level concept may become linked to several more concrete and specific attributes. These connections to concrete level knowledge give "extra" meaning to the abstract attributes. Our results indirectly support this notion as the more knowledgeable subjects elicited more concrete attributes than did the less knowledgeable subjects. A similar finding was obtained by Conover (1982) and was predicted by Geistfeld et al. (1977).

Knowledge structures can also develop in the opposite direction. As consumers gain experience and acquire more knowledge, their need to organize this knowledge into efficient and economical meaning units also increases. As suggested by Hayes-Roth's (1977) unitization theory, concrete concepts are recoded into fewer abstract concepts, thereby effectively reducing the number of salient dimensions that need to be activated from memory. Unfortunately, the triad procedure produced very few abstract dimensions (psychosocial consequences and values). Therefore, we are unable to explore whether more and less knowledgeable subjects differ in their more abstract knowledge.

Content of Knowledge

Finally, we described some differences in the actual dimensions used by more and less knowledgeable subjects. In general, the more experienced subjects tended to use more technical dimensions, and the less knowledgeable subjects tended to use more general concepts. However, many of concepts used by the two groups were similar. Future research should give greater attention to differences in the actual knowledge content of more and less experienced subjects.

Effects of Measurement

In all research, the measurement procedures affect the type of data that are obtained. When measuring knowledge structures, the effects of measurement seem especially obvious. For instance, in the present study, the triad elicitation procedure seems to elicit relatively concrete levels of knowledge. Future research should use other methods--such as free elicitation (Olson and Muderrisoglu 1979; Dacin and Mitchell 1986), laddering (Gutman 1982), or knowledge questionnaires--in combination with the triad task to measure the content and organization of knowledge structures. For instance, free elicitation could be combined with the triad procedure to activate a wider range of content in consumers' knowledge structures (cf. Kanwar, Olson and Sims 1981). Then laddering could be used to reveal the linkages and semantic associations between concepts at different levels of abstraction. These richer and deeper descriptions of knowledge might reveal differences between more and less experienced consumers. Again, future research should study subjects with extreme differences in experience and knowledge to maximize observed differences in measured knowledge structures. Finally, specific purchase or usage situations could be incorporated into all of these procedures to explore how situational contexts affect the activation of consumers' knowledge.

Summary

We found that more and less knowledgeable subjects differed somewhat in the dimensionality, articulation, and abstraction of their knowledge structures. We are encouraged by these results. They provide evidence that aspects of peoples' knowledge structures can be measured relatively directly. Future research should strive to improve the approach used here and combine it with alternative methods for directly measuring consumers' knowledge.

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MEASURES OF THE ATTRIBUTE STRUCTURE UNDERLYING PRODUCT TYPICALITY

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Abstract

The attribute structure of product categories and its effects on product typicality were examined, for 14 brands of shampoo, in laboratory studies with college students. An alternative to Rosch and Mervis' (1975) family resemblance measure of the attribute structure underlying typicality is proposed, based on multi-attribute attitude theory. Results confirm a positive relationship between perceived product typicality, the proposed measure of attribute structure, and attitude toward the product. Implications for prior conceptual work in categorization, attitude theory, and consumer behavior are discussed.

Introduction

When consumers think of snack foods, they recall products like popcorn, apples, and yogurt. Most consumers recall popcorn sooner than yogurt, and regard popcorn as a better, more typical example of a snack food. Consumers also might think of "McDonald's" as a better, more typical example of "fast food restaurants" than "Colonel Sanders" or "Pizza Hut." More generally, consumers appear to regard some products and brands as more typical than others. More typical products and brands are recalled faster as category members, and may be learned sooner and even used as "standards of comparison" for other products and brands. More typical brands may also be more preferred by consumers. But what is it that determines whether one product or brand is more "typical" of a category than another?

In the present research we explore the determinants of typicality in product categories, and in particular examine the attribute structure underlying typicality, and explore alternative ways of measuring it. Our study advances prior work by (1) developing an improved measure of the attribute structure underlying differences in typicality among products, (2) theoretically and empirically showing how the measure relates to not only the perceived typicality of brands but also affect toward brands, and (3) discussing the implications of these findings for consumer behavior and marketing practice.

Typicality Effects

Research in cognitive psychology shows that categories have graded structure (Lingle, Altom and Medin 1984). That is, people perceive members of natural object categories (like birds, trees, and vehicles) and goal-derived categories (like things to take on a picnic) to vary in their representativeness or typicality of the category.

As category members become more typical, they gain increasing priority in a number of cognitive tasks. Research (Mervis and Rosch 1981) shows that more typical instances of a category tend to be:

- * named first in free recall of category instances
- * classified faster than less typical instances
- * classified with fewer errors
- * learned more rapidly as a category member
- * used as cognitive reference points in comparisons (more typical members tend to be "standards of comparison" for less typical members)

Recent research also suggests that more typical members of goal-relevant and natural object categories tend to be more preferred than less typical members (Barsalou 1983, 1985), perhaps since they tend to possess attributes that are useful for goal fulfillment to a greater degree than less typical category members.

Marketing researchers have just begun to explore the implications of prototypicality effects for consumer behavior (see, e.g. Cohen 1982). Initial research interest has focused on whether members of product categories vary in their typicality, and whether typicality is associated with the effects noted above. Recent studies have found that members of product categories vary in typicality, and more typical members tend to be recalled sooner than less typical members (Nedungadi and Hutchinson 1985, Ward and Loken 1986). Aside from Nedungadi and Hutchinson's (1985) finding of a relationship between rated liking and typicality in two product categories (magazines and beverages), the relationship between perceived typicality, affect, and beliefs about product attributes has been little explored.

Given the current interest of consumer researchers in the effects of typicality in product categories, further research is necessary on (1) what factors determine typicality, (2) how these characteristics relate to preference, and (3) how the product or brand characteristics underlying typicality should be measured.

Determinants of Typicality

Research by Barsalou (1985) suggests that the perceived typicality of a category member may be influenced by at least three factors: (1) the category member's family resemblance to other members of the category, (2) the extent to which it has "ideal" attributes, i.e. attributes useful to achieving the goal served by the category, and (3) its frequency of instantiation, i.e., the number of times the category member has been encountered as a member of the category. The relative influence of these factors appears to vary between natural object and goal-derived categories. In natural object categories, Barsalou (1985) found that family resemblance had the strongest correlation with perceived typicality. The other two factors had significant, though smaller, influences. In goal-derived categories, the relationship between family resemblance and perceived typicality was not significant. Only the degree to which an item had an attribute relevant to goal achievement and its frequency of instantiation appeared to be associated with typicality.

The attributes of category members can be viewed, and measured, from two different perspectives. Family resemblance measures the degree to which an item shares attributes with other members of a natural object or taxonomic category. From Barsalou's perspective, only attributes which facilitate achievement of a goal are relevant. These measures, and their potential limitations, are discussed below.

Measures of the Attribute Structure Underlying Typicality

The typicality of a category member, as described by Rosch and Mervis (1975), is a function of its family resemblance, that is, the degree to which the exemplar possesses attributes of other category members and the frequency of those attributes among the members of the category. The measure of family resemblance developed by Rosch and Mervis (1975) is illustrated by the example shown in Figure 1 (Ward and Loken 1986). The example supposes that a product category is made up of four products, and each product has three attributes, represented as ABC, BCD, ADE, and AFG. To compute a family resemblance score, each attribute of every product is weighted by the number of products in the category set that possess it. Next, an overall family resemblance score is computed for each product by summing the weights of each of its attributes.

This procedure assigns a product a higher family resemblance score to the extent that it possesses more attributes, and to the extent these attributes are shared by other category members. In our example, the product ABC has the greatest family resemblance score.

FIGURE 1

Example of Family Relevance Score Computation

	ABC	BCD	ADE	AFG
Attribute A	(3)*		(3)	(3)
B	(2)	(2)		
C	(2)	(2)		
D		(2)	(2)	
E			(1)	
F				(1)
G				(1)
Family Relevance Score:	7	6	6	5

*Numbers in parentheses represent the scores associated with each attribute, computed by summing the number of products in the set that contain that attribute.

Rosch and Mervis (1975) have shown that family resemblance scores correlate highly (in the .8 to .9 range) with independent measures of typicality, such as a single-scale measure that asks for a rating of "how good an example of the category each brand is" (cf. Ward and Loken 1986), for several natural categories.

Recently, Ward and Loken (1986) corroborated these findings for the category "snack foods"--a product category of types of things like popcorn, apples, and yogurt similar to the natural categories Rosch and colleagues have explored in their research. Ward and Loken found a correlation of .87 between the family resemblance scores of snack foods and their rated typicality. However, they found a very low correlation of only .03 between the family resemblance scores of shampoo brands and their rated typicality.

Methodological Problems with Family Relevance Measures

The above results suggest that Rosch and Mervis' (1975) procedure for computing family resemblance scores may be limited in its application to certain categories (e.g. superordinate categories like types of products) similar to stimuli Rosch has used in her research. Several procedural aspects may contribute to this limited application. The measure is computed from subjects' responses to open-ended questions about the "attributes or characteristics you think describe this object," and all attributes and characteristics listed by subjects for any object in the category are ultimately used in the computational process. The list of attributes generated by subjects can be very long, and may include many attributes that are not "salient." In our previous study, some subjects mentioned many more small, idiosyncratic differences in package design (e.g. "gold trim on label") than salient functional and physical differences. Such remarks received heavy weights in determining family resemblance scores even though other data, to be discussed, revealed that features like "color of cap" are not salient purchase criteria for shampoo. The use of a visual stimulus (slides) for exposing subjects to brands of shampoos but not snack foods may have accentuated these tendencies. However, in a test of the effect of presenting category members to subjects via written cues or actual observation of the items, Rosch et al. (1976) found that the measure performed equally well for both stimulus formats.

Another methodological problem with the family resemblance measure is that unique attributes mentioned by one or more subjects about a category member increase the object's

family resemblance score (by "1"), seemingly counter-intuitive to the procedure's objective. Furthermore, a good deal of subjectivity is involved in the procedure. For example, coders are allowed to credit a category member with attributes not mentioned by any subject but "clearly and obviously" true of the member (Rosch and Mervis, p. 570). Finally, the family resemblance score of a category member depends on the specific set of products measured. If the set changes, so does the score.

Conceptual Problems with Family Relevance Measures

Besides these methodological problems, a more fundamental flaw may exist in the use of family resemblance as an explanation for typicality differences among brands. Consumers may judge the typicality of a brand not by its family resemblance to other brands but instead by the degree to which the brand has attributes related to the goals or uses of the category (Barsalou 1983, 1985). This view is consistent with most models of consumer behavior (e.g. Engel and Blackwell 1982) that assume that consumers view products and brands as means to satisfy their goals.

The proposed view becomes particularly plausible in view of the recent finding, corroborated by the present study, that a positive relationship exists between typicality and brand preference (Nedungadi and Hutchinson 1985). This seemingly curious relationship would follow logically from an assumption that more typical brands have more valued attributes.

Barsalou's Measure

In a recent study, Barsalou (1985) attempted to measure the degree to which category members possessed "ideal" attributes by a simple procedure. He intuitively chose a dimension along which he felt subjects would evaluate category members. Then he asked subjects to rate each item in a set of categories by the "amount" of the dimension. For example, he asked subjects to rate birthday presents by how happy people are to receive the presents; he rated vehicles by how efficient each is as transportation. The ratings were collected by asking ten subjects to rate a category member on a nine-point scale that measured whether the subject perceived the item to have a very low amount or a very high amount of the chosen dimension.

Barsalou acknowledges that this measure is an incomplete way to assess the degree to which a category member is ideal. He notes that,

Because only one ideal was observed for each category, and because each ideal was picked intuitively, these experiments only show that ideals are related to typicality; they do not provide accurate estimates of the strength of this relation . . . (p. 641)

Alternative Measure of Attribute Structure

To address the above concerns, an alternative procedure to family resemblance for measuring the attribute structure underlying typicality was developed in the present research. This procedure measures the degree to which the members of a product or brand category have attributes that are salient in a purchase decision. Therefore, this is an initial attempt to design a measure more objective and complete than Barsalou's, and to solve the problems associated with Rosch's technique. This alternative procedure is based heavily upon prior conceptual work of Fishbein and Ajzen (1975) in the development of a multi-attribute attitude model. First, an adaptation of Fishbein and Ajzen's technique for eliciting a hierarchy of salient beliefs was used. In the present case, we asked subjects, in an open-ended format, to list all the attributes of shampoo that would influence whether they would (1) buy the shampoo or (2) not buy the shampoo. The most frequently mentioned attributes were taken as the "modal salient" attributes of brands of shampoo. This procedure

differs from Fishbein and Ajzen's in that the set of salient beliefs was not measured uniquely for each brand of shampoo within the category, but does allow the development of a measure of graded structure across all items in a category.

In the next step subjects were asked to rate the likelihood that each member of a category had each salient attribute. The average or summed rating across all subjects, for each brand and each salient attribute, was then computed. The sum of these ratings across all salient beliefs represented the brand's "attribute structure" score.

Purpose of Study

In the present study we attempted to test this alternative formulation of attribute structure, as an indicator of the attributes underlying perceived typicality, by relating its results to former data on typicality, family resemblance, and physical similarity. The conceptual basis of our measure has several additional implications. First, since we propose that typicality should be related to a measure of attribute structure, based on the attitude model of Fishbein and Ajzen, we should also find a link between typicality and a more global measure of attitude. This argument provides a conceptual rationale for previous findings linking typicality ratings to preference (Nedungadi and Hutchinson 1985), and to goal fulfillment (Barsalou 1985).

Second, while for certain product categories the physical features of the product are important to its overall evaluation (Ward, Loken, Ross and Hasapopoulos 1986) or to the formation of functional beliefs about the product (Loken, Ross and Hinkle 1986, Ross and Loken 1983), these features should represent only part of the consumers' underlying belief structure about the product. Since this belief structure is presumed to underlie attitude toward the brand, it should be more strongly related than mere physical similarities to attitude. Therefore, the relationship between family resemblance scores (which appear to be heavily influenced by physical features) and attitude toward brands should be weaker than the relationship between the proposed attribute structure scores and attitude. Another implication of this point is that the physical similarity of brands to all other brands should be more strongly correlated to their family resemblance scores than their attribute structure scores, and thus attitudes. Finally, if consumers primarily think of the brands in product categories in terms of their relevance to purchase goals, attribute structure scores should be correlated more strongly with typicality than physical similarities. Analysis of this relationship should provide insight into whether consumers structure product categories by the goal relevance of items or their physical similarities.

In sum, the present study explores the relationship between perceived typicality and several measures of potential determinants--family resemblance, an alternative measure of the attribute structure of members of product categories, and physical similarities among brands. The study then explores the relationship between attitudes toward brands, their perceived typicality, and the attribute structure that may influence both perceived typicality and brand attitudes.

Methodology

Overview

Data collected from a set of laboratory studies were used to test the above hypotheses. In the first study, a sample of 66 college students completed measures of typicality and family resemblance for 14 different brands of shampoo. In a second study, 82 students were asked to rate the same 14 brands of shampoo along belief and attitude (affect) dimensions. Finally, a third study had groups of 112 college students rate the physical similarities

of all possible pairs of the 14 brands of shampoo. The students were not selected for prior knowledge or use of the brands or lack thereof. Although separating the measures of physical similarity, typicality, beliefs, and affect was not intentional (each study was designed with different purposes in mind, tests different hypotheses from the present study, and is reported in more detail elsewhere), this separation helped to ensure that each type of measure would not affect the others.

Selection of the 14 shampoos was based upon prior research which showed that (1) this set included popular brands as well as less popular private labels (four of the brands were private label imitators of four of the national brands included), and (2) the brands represented a diverse range in terms of physical similarity.

Measures and Procedures

Global Typicality Ratings. As part of Study 1, procedures developed previously by Rosch and Mervis (1975) were used to obtain a global typicality measure of the 14 shampoos. Subjects were asked to judge how good an example of the product category various brands in the category were. While viewing a slide showing each brand of shampoo in its usual package, subjects completed typicality ratings on 0-10 scales with endpoints "extremely poor example" and "extremely good example." So as to avoid confusion with this scale and a "good-bad" attitude scale, subjects were explicitly instructed to use the scale to rate the typicality of items, not their preference for the items. An example of this was provided to them. Barsalou (1985), using scales with "excellent" and "poor" endpoints, found that typicality was correlated with preference for only certain categories (goal-oriented and not "common" categories), providing some evidence that subjects do not confuse "goodness-of-example" ratings with attitude ratings.

Computation of Family Resemblance. To derive attitudes to use in computing family resemblance scores, each subject in Study 1 gave attribute listings for four different shampoos. At the top of each of the pages intended for listing attributes was the name of the brand of shampoo (e.g. "PERT") and the clause "Attributes or characteristics you think describe this product:".

To compute family resemblance--the degree to which an object has attributes that overlap those of category members--a multi-stage procedure developed by Rosch and Mervis (1975) was followed. First, all attributes mentioned by one or more subjects for any shampoo were written down on a master list. Second, each shampoo for which that attribute had been listed was credited with having that attribute. Following Rosch and Mervis' instructions, two researchers deleted cases for which the brand-attribute match was clearly false, and included cases for which a brand-attribute match was clearly true but not mentioned by subjects. No new attributes were added to the master list for shampoos (i.e. no attributes not listed by subjects were added). In cases where the two judges disagreed, no brand-attribute match was included. We found that certain heavily value-laden and ambiguous attributes (e.g. "high quality") had to be omitted from analyses in order to follow the Rosch and Mervis technique, since a judgement about which brands should be credited with these attributes would be highly subjective. These omissions, while infrequent, may have contributed modestly to the low correlation between family resemblance and typicality found in Ward and Loken (1986).

Next, each attribute in the master list received a score that represented the number of brands of shampoo that contained the attribute. Therefore, attributes were weighted by the number of category members that contained them. Finally, to compute the total family resemblance score for each shampoo, the weighted scores of each of the attributes that had been listed for a particular product or brand were summed.

Attitude and Belief Ratings. Subjects in the second study were shown slides of the 14 brands of shampoo, one at a time. The order in which the 14 brands were shown was randomized, then held constant across all subjects. While viewing each brand, subjects completed rating scales about their perceptions of the product's attributes, their attitudes toward the product, and self-reported knowledge of the product. Each of the 14 brands was rated along 9 belief dimensions (see Ward, Loken, Ross, and Hasapapoulos (1986) for a list of the dimensions). These dimensions were developed through open-ended pretests with a sample characteristic of our subject population. In the pretest, subjects were asked to list "the positive and negative attributes, qualities or characteristics of a shampoo that would increase (or decrease) your chances of purchasing it." This procedure is an adaptation of Fishbein and Ajzen's modal salient belief elicitation procedure (1975). The eight most frequently mentioned attributes were used to form belief statements in the main experiment. An additional attribute ("controls dandruff") was added, since two shampoos were dandruff shampoos.

The nine beliefs were measured on likelihood scales from 0 (extremely unlikely) to 10 (extremely likely). Since all attributes were positive, an attribute structure score was computed by taking the average belief rating across all subjects, and summing these ratings across all 9 attributes for each brand.

Attitude toward the brand was measured by asking subjects to rate each shampoo ("Overall, how would you rate this shampoo?") on three 0-10 evaluative scales (high-low quality; good-bad; satisfactory-unsatisfactory).

Physical Similarity. In a third and final study, subjects provided data on the physical similarities between the same 14 different brands of shampoo. Four groups of subjects rated all possible pairs of shampoos, and were asked to make similarity ratings on a scale from 0 (extremely dissimilar) to 10 (extremely similar). Subjects were carefully instructed to judge whether the pairs were similar in overall appearance, not in their functions or quality attributes: "We want you to tell us whether or not the two products look alike in appearance . . . [we] do not want you to tell us whether the two products are similar in what they do for your hair." An illustration was provided to clarify this difference, and subjects did not appear to have any difficulty in understanding the nature of the task.

Using the data on pairwise physical similarity between brands, we computed a measure of each brand's relative similarity to all the other brands by summing the similarity scores of the brand to all other brands. Brands that were perceived as very similar to other brands received higher summed scores than brands perceived as dissimilar to others.

Results

Pearson's correlations between mean typicality ratings, family resemblance scores, mean attitudes, physical similarities, and attribute structure scores were computed. Correlations are reported in Table 1, and means and ranks are in Table 2 for each brand of shampoo. The correlations show that typicality ratings are strongly related to the proposed measure of attribute structure and to attitudes toward the individual brands. As reported previously (Ward and Loken 1986) and listed in Table 1, typicality was not related to family resemblance for these stimuli. Furthermore, the proposed attribute structure measure is more strongly related than family resemblance to attitudes.

The analyses revealed a strong and significant correlation between family resemblance and physical similarity. This result seems to confirm our belief that in previous research the family resemblance measure captured too much detail about the physical appearance of the objects rated.

Physical similarity was not strongly related to either the proposed attribute structure measure or to typicality.

TABLE 1
PEARSON'S CORRELATIONS

	TypR	AtStruc.	FamR	Phys
Typicality Rating (TypR)				
Attribute Structure Score (AtStruc.)	.88*			
Family Resemblance (FamR)	.17	.26		
Attitude Toward Brand (AtB)	.88*	.65*	.10	
Physical Similarity (PhyS)	.28	.36	.75*	.16

*Significant at alpha = .05

The most notable exception to the overall pattern of correlations was Head & Shoulders shampoo. This brand was ranked high in typicality and attitude, but low in attribute structure. These results may have occurred because dandruff control should have received a disproportionate weight in computing the attribute structure score for Head & Shoulders. In future research the attribute structure measure might be improved by the addition of importance or evaluation weights.

Another explanation for the anomalous performance of Head & Shoulders is the possibility that attributes influencing the typicality of items in the sub-category of "dandruff shampoos" differed from the superordinate "shampoo" category. The relationship between category level, attributes salient for superordinate and subordinate category members, and typicality needs further exploration.

Discussion

The study's results, and the proposed measure of the attribute structure underlying product typicality, have the potential to help integrate several lines of inquiry including research on typicality, goal-derived categorization, and attitude theory. The findings also offer a number of implications for marketing practitioners.

Attribute Structure

The present results suggest that typicality is strongly related to consumers' salient beliefs associated with the brand. The more a brand of shampoo has each of these attributes, the greater that brand's rated typicality.

These results provide evidence that the proposed measure of attribute structure is better related to typicality, and may provide more insight into the underlying determinants of typicality, than Rosch and Mervis' measure of family resemblance. This outcome is encouraging because our procedure has several advantages over traditional family resemblance measures. First, the proposed measure is less subjective and more quantitative than family resemblance measures. Second, it is easier to administer and requires less time and effort in coding and computation. Finally, it is based upon prior conceptual and measurement work in attitude theory, and provides an alternative theoretical rationale for various findings in the typicality literature (such as the relationship between typicality and preference, noted earlier). The procedure and our results are a step towards integrating prior work in categorization with not only attitude theory but also Barsalou's (1983) view of the structure of goal-oriented categories, a view that is currently attracting the interest of consumer researchers (Nedungadi and Hutchinson 1985).

Evoked Set

Our data, and Nedungadi and Hutchinson's (1985) results, show that more typical brands are recalled as members of a

TABLE 2

RANK ORDER OF RAW DATA, BRANDS, EACH MEASURE

	Mean Typicality Ranks (Ratings)	Mean Attribute Structure Ranks (Scores)	Family Resem- blance Ranks (Scores)	Mean Attitude Ranks (Ratings)	Mean Simi- larity Ranks (Ratings)
Vidal Sassoon	1 (7.92)	1 (74.95)	13 (166)	1 (22.09)	12 (44.93)
Johnson & Johnson's Baby Shampoo	2 (6.95)	4 (66.91)	11 (172)	3 (19.51)	5 (56.87)
Suave	3 (6.87)	9 (58.98)	2 (203)	7 (17.73)	4 (57.39)
Flex	4 (6.65)	2 (67.89)	5.5 (194)	4 (19.17)	8 (49.14)
Head & Shoulders	5 (6.38)	13.5 (45.87)	9 (177)	2 (20.83)	11 (47.12)
Agree	6 (6.32)	6 (64.98)	3 (202)	8 (17.58)	3 (57.55)
Prell	7 (6.27)	7 (64.27)	4 (201)	10 (17.17)	2 (57.84)
Pert	8 (6.18)	8 (62.94)	12 (171)	9 (17.26)	10 (47.22)
Clairol Herbal Essence V05	9 (6.08)	3 (66.96)	1 (212)	5 (18.30)	6 (56.18)
Store Brand Baby Shampoo	11.5 (4.78)	5 (65.51)	5.5 (194)	6 (18.36)	1 (59.04)
Store Brand Professional Formula	11.5 (4.78)	11 (54.06)	7 (186)	12 (44.44)	7 (55.96)
Store Brand	12 (3.02)	10 (54.98)	14 (153)	11 (13.20)	14 (42.72)
Store Brand Dandruff Shampoo	13 (2.45)	13.5 (45.87)	10 (175)	14 (12.19)	9 (47.71)
		12 (48.88)	8 (179)	13 (13.28)	13 (43.26)

category faster than less typical brands. If typical brands come to mind sooner, and if the consumer screens brands for entry into his or her evoked set by a heuristic such as "I will further consider the first X brands that I recall which pass a minimum performance criterion," then more typical brands should be especially likely to enter the evoked set. Without further explanation, the possible relationship between typicality and propensity to enter the evoked set does not appear functional for the consumer. But our model suggests that more typical brands tend to have higher values on attributes useful for the solution of a consumption problem and therefore should be more likely to enter the evoked set. Consistent with our model, Laroche, Rosenblatt, Brisoux, and Shimotakahara (1982) found that products in the evoked set are more favorably evaluated than other products the consumer is aware of.

Future Research

The theory and results discussed in the present study suggest some possibilities for further exploration. First, future studies might continue to explore the application of attitude theory to understanding the relationship between preference and typicality. In particular, the attribute structure measure might be further improved by the addition of weights for the salient beliefs. Further study of whether the source attributes are salient in determining typicality at superordinate and subordinate category levels would also be useful.

The positive relationship between typicality and preference raises an interesting question: Why do apparently atypical products sell? For example, most people may not rate a Porsche as a typical car. However, as noted before, a Porsche might be regarded, at least by a limited segment of consumers, as a typical "expensive sports car." Future research might also begin to explore how product category prototypes are formed. Research questions might include the influence of early entrance to the category, the influence of market share, and the influence of the consumer's particular sequence of learning about the category (first brand encountered, etc.) on prototype formation.

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Introduction

The three papers to be discussed below are all quite well done, and the authors are to be commended for the quality of work presented here. Thus, there are no major criticisms of the papers that need to be addressed. Instead, the major thrust of these comments concerns questions that should be answered in future research in each particular area. Also, the three papers have enough in common that areas of mutual benefit will be discussed.

"A Simple Representation of the Contingent Structure of Knowledge"

Deighton's paper presents a very interesting method for measuring peoples' knowledge structures. He demonstrates that for known groups, the technique produces plausible and meaningful knowledge structures. One minor point of concern with the paper, as initially presented, is that some readers may find it difficult to understand exactly how one would start with raw data and end up with a graphical representation of a group's knowledge structure. In other words, in order for others to make use of this technique, the method needs to be explained in more detail. However, in fairness to the author, the major point of the paper was to make others aware of the technique and demonstrate its usefulness, and given the space constraints for the paper, such information could easily be included in a longer version of the paper.

Two areas of concern need to be addressed in future research using this technique. First, in Deighton's example, the sample size was five. The obvious question is, what happens when the sample size becomes larger. Will the technique still be able to produce distinguishable and meaningful knowledge structures, or will they become indistinguishable and uninterpretable? If, for example, different groups are relatively homogeneous and distinct from each other, then the usefulness of the technique would not be likely to be affected by sample size. If, however, the groups lack homogeneity and they are not very distinct from each other, a large sample size may cause the representations of knowledge to become blurred or indistinguishable. This needs to be investigated in future research.

A second point, which is loosely related to the first, concerns the sensitivity of the technique in terms of being able to detect different knowledge structures of different groups. In Deighton's example, the two groups were general health food consumers and a more radical group that espoused the Pritikin ideology. What needs to be determined is just how different these two groups are in terms of their belief patterns using some other method so that the sensitivity of Deighton's technique can be assessed. If it turns out that, through independent assessment, the two groups are not vastly different when compared to a general (non-health) food consumer, for example, then the technique may be fairly sensitive. On the other hand, should the two groups turn out to be as different from each other as they are from the general food consumer, then the sensitivity of the technique remains in question. This is especially important if the technique were to be used in assessing the knowledge structures of different segments, for example. If the technique lacked sufficient sensitivity to detect such differences, one would be lead to making a type II error and conclude that no significant differences in beliefs exist when in fact they do.

"The Structural Characteristics of Consumers' Knowledge"

This paper deals with the knowledge structures of experts versus novices. In particular, knowledge structures are investigated in terms of their dimensionality, articulation, and abstraction. The authors' results showed that experts used significantly more dimensions and produced significantly more concrete attributes on the abstraction measure than did novices. All other results were in the expected direction, but were not significant.

While these results are interesting, and make a useful contribution to our knowledge in this area, the major question remains: "What do these results mean to consumer behavior?" Researchers have known for quite some time that experts and novices have different ways of thinking about a particular domain, but the implications of this have rarely been pursued. They were not pursued in the present paper more than likely due to space limitations.

Nevertheless, interesting questions concerning the implications of such research can be investigated in future research. For example, can these results be used to develop different communications mixes for experts and novices. The authors' results would imply that experts should be given more dimensions and more concrete attributes to evaluate products than should be given to novices. Or perhaps their results could be applied to developing different communication mixes for different stages of the product life cycle. When a product is first introduced, everybody is a novice, so provide them with relatively few dimensions for evaluation. As the product matures, more people become familiar with it, and more dimensions could be provided for evaluation. In short, it seems that in this area, the discipline is now at a point where future research should concentrate on investigating the implications of such findings if further progress is to be made.

"Measures of the Attribute Structure Underlying Product Typicality"

This paper explores the determinants of typicality in a product category. The major contribution of the paper is the development of an alternative, and apparently superior, method of investigating typicality. The authors' results showed that their measure was more highly related to global measures of typicality than other existing measures, and was more highly related to attitude than other measures. The authors did an especially good job of developing their measure based on multi-attribute attitude research, and using this research to develop their hypotheses.

One major point of concern needs to be investigated in future research. The authors mention that the concept of instantiation has been shown to be a determinant of typicality. Instantiation refers to the number of times an item is encountered as a member of a particular category. This concept was not controlled for in their research, but it appears that it could have a considerable impact on their results. Instantiation of a particular brand is likely to be highly influenced by advertising, so if familiarity were controlled for, how might their results have been affected.

Specifically, they found a correlation of .88 between typicality and attitude toward the brand. How much of that relationship is due to the possibility that the most heavily advertised brands become the most familiar (and typical) and most well liked. Similarly, instantiation may also affect the .88 correlation between their attribute-structure measure and typicality. Subjects may not

have known enough about all fourteen brands of shampoo to give reliable information about them, so the most heavily advertised brands become the ones that people know the most about and regard as typical.

Overlap of the Different Research Streams

As stated at the outset of these comments, the papers have enough in common to allow them to build on each other in future research. Some of the broad areas that could be investigated in future research include, but are by no means limited to, the following. What would be found if Deighton's technique for measuring knowledge structures was applied to the expert versus novice questions investigated by Walker et al? Would experts have more complex structures because they use more dimensions? Are there any differences in the way experts and novices judge typicality? How would the fact that experts use more dimensions affect what they regard as typical? How are Deighton's technique of measuring knowledge structures and Loken and Ward's attribute structure measure related? Do different knowledge structures affect typicality ratings, or does what people regard as typical affect their knowledge structure? How does instantiation, or frequency of exposure affect knowledge structures? Many other such questions could serve as useful starting points for future research in this area.

COMPARABILITY AND COMPETITION AMONG CONSUMER PRODUCTS:
A TYPOLOGY FOR SPECIFYING HIERARCHICAL COMPARISON STRUCTURES

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Abstract

This paper presents a typology for identifying the levels of comparability and competition among consumer products. Two dimensions of comparability are described: utility and investment. It is proposed that consumers make comparisons on the utility dimension at the lowest level of abstraction at which products have attributes in common. This comparison level determines the level at which the products compete.

Introduction

Consumers make comparisons among brands, products, and product classes in order to allocate their budgets. They compare items on price and on the utility they expect to derive from the items' features. The most specific level at which two items can be compared on this utility dimension determines both the abstractness of the concepts required to make the comparison and how difficult the comparison is to make. For example, two automobiles may be compared on the concrete attribute of fuel efficiency, while an automobile and a vacation must be compared at a higher, more abstract level such as the fun provided. The theory presented here hypothesizes that the lowest (least abstract) level of comparison possible for two products will be the level at which consumers compare the products in making a choice between them. Thus, the level of comparability also determines the level of competition, which can range from the brand level, to the level of functions or abstract values, or even to the overall utility provided by the products.

The paper proceeds with a review of literature concerning comparability and levels of competition in consumer choice. The section on theory outlines a typology for identifying the levels of comparability and competition among consumer products. Two dimensions of comparability -- utility and investment -- are described in detail.

Background

Making comparisons among brands in the same product class is a relatively simple task primarily because it is easy to identify the attributes upon which the products are to be compared. Faced with limited budgets, consumers are often placed in the position of having to choose among and, thus, compare products from different product classes. This is a more difficult task. Consumers could do this by taking a holistic approach and evaluating the relative overall utility of the alternatives, but research suggests that they prefer to find comparable representations at intermediate levels of abstraction (Johnson 1984). In this way a consumer may compare two apparently noncomparable alternatives (such as a video cassette recorder and season tickets to the ballet) on abstract values (such as potential for fun and enjoyment).

Few studies have addressed the issue of choice among products with sets of descriptive attributes that do not completely overlap and fewer have been concerned with how the choices and implied comparisons are made. Work on consumers' purchase priorities for durables has focused on identifying the order in which consumers in aggregate tend to purchase major durables, but this research has been descriptive rather than attempting to explain the patterns uncovered (Beckwith and Lehmann 1980; Clarke and Soutar 1982; Hebden and Pickering 1974; Kasulius, Lusch and Stafford 1979; McFall 1969;

Paroush 1965). Similarly, recent research on competition and the identification of product-markets has been more concerned with identifying boundaries and describing competition among products in different situations than in the levels at which they compete and why (Srivastava, Alpert, and Shocker 1984).

A number of studies have been concerned with the concreteness versus abstractness of product attributes, although not in the context of comparability. In their discussion of product constellations, Solomon and Assael (1986) are concerned with the symbolic values of products and their association with social roles. This perspective, although focusing on complementarity rather than competition, also requires analysis of acquisition and consumption across product classes. In other studies, Paivio (1971) relates abstractness to verbal learning, and Rosch (1975; 1977) discusses its relevance to categorization.

In his theory of consumer behavior Howard (1977) proposes that consumers have hierarchical evaluative structures corresponding to their semantic and memory structures. Further, at each level of these structures there are values which generate that level's choice criteria. He makes Rokeach's (1973) distinction between instrumental values and the more abstract terminal values (related to the value level of comparison specified in the typology presented here) and associates them with choice at the brand and product class levels, respectively. Boote (1975) found empirical support for this association.

The most recent and immediately relevant work has been done by Johnson (1984; 1986) and Johnson and Fornell (1986). The focus of this research is on the cognitive representations and choice strategies employed at different levels of product comparability. These authors did not specify the distinctions among alternative pairs at different levels of comparability and used judges to provide measures of similarity as an indication of comparability. The typology presented here will provide theoretical guidelines for identifying the level of comparability which may then be tested by comparison with the decision processes used by consumers.

Theory

This theory proposes that consumers use within attribute choice strategies at the lowest possible level of attribute abstraction. At the highest level of abstraction, where utility is the only common attribute, this amounts to an across attribute strategy (e.g., a compensatory additive utility strategy). As this implies, attention is limited here to high involvement choices among small numbers of alternatives -- tasks in which compensatory strategies are both appropriate and possible. Phased strategies are not considered.

Consumer value depends on the utility derived from an item and the investment needed to acquire it. Thus, comparability is defined here in two dimensions -- utility and investment. Five basic levels of comparability are identified for the utility dimension (Table): technology, micro-function, macro-function, basic value, and overall utility. A pair of products is classified as comparable at one of these levels if that level is the lowest common denominator -- the most specific level at which the items may be compared. It is this level of comparability or similarity in needs satisfied and methods used to satisfy them that determines the degree

or level of competition (Weitz 1985). The extremes of the investment dimension are comparable or identical prices and noncomparable or very dissimilar prices.

It is important to remember that while discrete levels of comparability are discussed, they represent segments of a continuum. Thus, an infinite number of levels within levels could be specified. The objective here is to identify and describe a useful number, which may be larger or smaller in applications.

TABLE
LEVELS OF COMPARABILITY AND COMPETITION

LOWEST LEVEL OF COMPARABILITY	EXAMPLE	LEVEL OF COMPETITION
Technology	<u>Microwave oven</u> Amana vs. Panasonic	Brand (Features)
Micro-function	<u>Cooking</u> Microwave oven vs. toaster oven	Technology (Microwaves vs. heating element)
Macro-function	<u>Food preparation</u> Microwave oven vs. food processor	Micro-function (Cooking vs. mixing)
Basic value	<u>Convenience</u> Microwave oven vs. answering machine	Macro-function (Food preparation vs. communication)
Overall utility	<u>Utility</u> Microwave vs. Disney World vacation	Basic value (Convenience vs. entertainment)

Utility Dimension

The most obvious level of competition on the utility dimension and the one that has received most attention in the consumer behavior literature is brand competition. At this level products share a technology and set of objective attributes or features upon which they are easily compared. To use the example in Table 1, Amana and Panasonic microwave ovens use comparable technologies and compete on such attributes as power, size, and ease of use. They may also compete on higher levels, such as convenience, but the focus is on the objective features they share that affect how relatively convenient the brands are.

Products that use different technologies, but share a specific function or micro-function compete on how they perform that function. Microwave and toaster ovens both cook food, but have fewer attributes in common than two brands of microwaves.

The lowest level of comparability of products that compete on micro-function is their more general function or macro-function. The macro-function of both microwave ovens and food processors is food preparation, although one cooks and the other mixes and chops. Choice among products from different product categories, of which this is an example, has been called generic competition (Kotler 1984). (It will not always be possible or useful to make the fine distinction between micro-function and macro-function.)

Products that do not share objective attributes or a definable function may have the same higher level, more abstract attribute or value. A microwave oven and a telephone answering machine have entirely different functions, yet they both provide convenience. Products will usually provide more than one value: microwaves

may be fun as well as convenient. The number of values two products share will determine their similarity within this level of comparability, just as the number of attribute levels or functions two brands share determine their similarity within the level of technological or functional comparability.

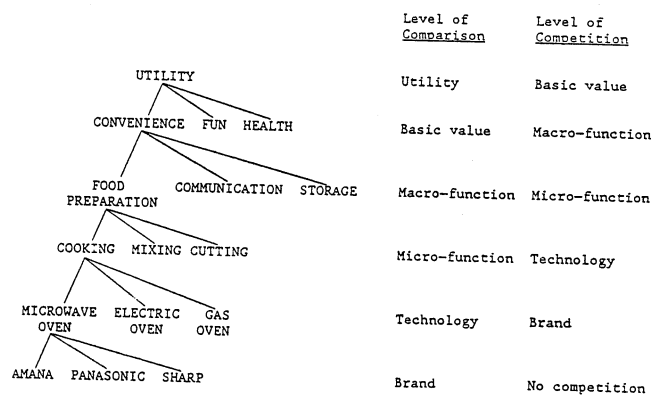
These values are related to Rokeach's (1973) personal terminal values. They are self-centered and refer to end-states of existence. Boote (1975) found that terminal values are more closely associated with product class choice (within the same micro-function) than with brand choice. This theory suggests that if even higher level choices were examined (macro-function or higher) we would discover that terminal values are even more closely associated with these choices.

Finally, if products do not provide any of the same values, they must be compared on overall utility. A microwave oven and a Disney World vacation, for example, might compete on which value has greater utility -- convenience or fun. This holistic level of evaluation is simply the extreme of this dimension of comparability, not an entirely different approach to processing product information. Making a comparison at the value level involves the same across-attribute processing at lower levels of abstraction in order to judge each product's merit on the abstract value.

Another way of viewing this comparison process is represented in the Figure. In this illustration the consumer works his or her way from the top to the bottom of the tree, stopping to make comparisons at the lowest level possible. For example, in choosing between a microwave oven and a food processor comparisons are easily made at the level of utility, basic value (compare on convenience), and macro-function (compare on contribution to food preparation ability). At the micro-function level, however, the products are not comparable -- how the microwave cooks cannot be compared with how the food processor mixes. Thus, the comparison must be made at the macro-function level and the products compete on whether the cooking or the mixing assistance provided contributes more to food preparation ability.

FIGURE

HIERARCHICAL COMPARISON STRUCTURE



Holbrook and Hirschman (1982) advocate an experiential perspective when studying products whose symbolic meanings are important (such as entertainment, art, and leisure activities), which would lead to focusing on subjective or abstract attributes. The reason for the importance of this perspective, placed in the context of this study, is that sometimes comparisons either cannot be made or do not have meaning at the objective attribute level because attributes have value almost exclusively in interaction with each other. The amount of yellow pigment used in an abstract painting contributes to its aesthetic appeal only in relation to the shapes, textures, and other colors used by the artist. In

choosing between two paintings, the lowest level of comparability might be micro-function -- provide aesthetic appeal through a two-dimensional work of fine art. If the chooser is also considering sculpture, the level of comparability might be macro-function -- provide aesthetic appeal through a work of fine art. Alternatively, the level might be a value such as beauty or excitement if the chooser is also considering the consumption of other sources of beauty or excitement such as a view from a cliff.

The more abstract the level of comparison, the more difficult it is to make the comparison. The difficulty arises from the need first to identify the salient abstract attributes (functions or values) and then to ascertain each alternative's position on those attributes. Neither of these tasks is as simple as evaluating a brand's possession of clearly defined objective attributes. Because decision-making at abstract levels is more difficult it should take longer.

Investment Dimension

The investment or price dimension of comparability is independent of the utility dimension. If two products require comparable investments (such as a microwave and a convection oven) they may have any level of comparability on the utility dimension (micro-function) and will compete only as determined by that level (technology). If they have very different prices (such as a microwave and a toaster oven) they will compete on price in addition to any other level determined by the utility dimension (technology).

Conclusions

The typology described here is intended to be a useful representation of the way consumer products are related in terms of comparability. It provides an outline of the basic relationships among products which may appear to be noncomparable and noncompetitive. Further, if this typology allows consumers' hierarchical comparison structures to be specified fairly accurately a priori, then it will be possible to identify the level of comparison and, thus, the level of competition of two products. Although marketers will be most concerned with products that compete at more concrete and direct levels, structures of this kind provide an indication of other levels of competition that may be important and the bases upon which more distantly related products compete.

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THE EMOTIONAL ASPECT OF PRODUCT INVOLVEMENT¹

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Abstract

Several products proposed to have varying degrees of emotion and involvement were measured and classified using the PII. Products were generally classified as expected with the exception of personal computers, which were perceived by the sample to have an emotional aspect. Some differences in product perception were found between males and females.

Introduction

Some current work on involvement manipulates the construct in terms of a cognitive/rational thought or in terms of an emotional or affective reaction to the stimulus in question (e.g., Park and Young, 1983, 1986). This view is appealing given the thrust of interest on emotional states in advertising. However, the method used to measure that affective level of involvement needs to be refined in order to facilitate research on the topic. It is the purpose of this paper to provide discussion and present some exploratory empirical work on measuring the emotional component of involvement perceived in product categories.

Background

When developing the Personal Involvement Inventory (Zaichkowsky, 1985), an investigation of the dimensionality and interpretation of the 20-item scale was carried out for each product category. Although one major factor always emerged, the individual item loadings on that factor varied across products. For certain products, several of the 20 items correlated and loaded more heavily on the residual factor that accounted for a minor percent of the variation. These items were boring-interesting, unexciting-exciting, mundane-fascinating and appealing-unappealing and on a face validity judgment seemed to represent the emotional or arousing side of involvement. For other products, these same items did load highly on the first major factor. An example of the factor loadings for the product categories of bubble bath and headache remedies displayed in Table 1 exemplifies this pattern. At this point I thought it might be possible to describe the involvement state of the subjects to the product, in terms of an emotional or cognitive relationship via the weights of the item loadings. For example, bubble bath might be described as an emotional or affective product, while headache remedies might be described as a cognitive or rational product, depending upon the loading of the affective word-pairs. Yet for other products this classification in terms of an emotional or rational type product may be inappropriate since no such pattern emerged (e.g., 35mm cameras). Both types of items were used equally by the subjects to describe their involvement level with the object. So although the PII was developed to measure involvement as high or low, the question of whether it could be used in a more complex manner arose.

¹The author wishes to thank Jon Greenesid for his careful computation of the data collected for this study. Constructive criticisms received from Gary Mauser of S.F.U. and the faculty at Penn State University were gratefully received and incorporated into this paper. The initial idea for this paper came from an anonymous JCR reviewer of the 1985 scale development article.

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TABLE 1
FACTOR LOADINGS FOR BUBBLE BATH
AND HEADACHE REMEDIES

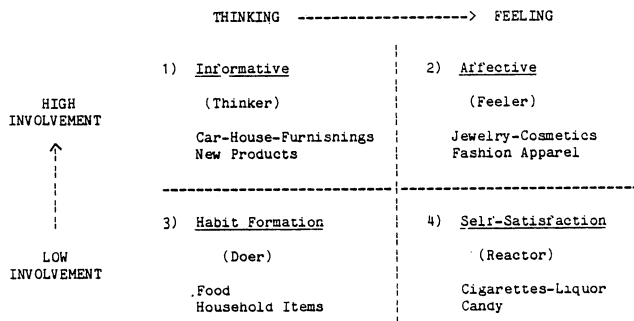
ITEM	Bubble Bath: N=45		Headache Remedies: N=68	
	Factor One	Factor Two	Factor One	Factor Two
Important	.35	.67	.86	.17
Of no concern#	.25	.75	.76	.19
Irrelevant#	.42	.74	.82	.24
Means a lot to me	.37	.58	.75	.41
Useless#	.54	.59	.75	.22
Valuable	.28	.41	.90	.20
Trivial#	.28	.58	.77	.21
Beneficial	.73	.18	.71	.25
Matters to me	.20	.33	.80	.34
Uninterested#	.57	.54	.65	.45
Significant	.29	.26	.85	.33
Vital#	.17	.35	.78	.34
Boring#	.82	.28	.16	.80
Unexciting#	.86	.37	.21	.76
Appealing	.80	.35	.36	.78
Mundane#	.77	.17	.30	.85
Essential	.23	.70	.76	.26
Undesirable#	.86	.33	.64	.46
Wanted	.72	.42	.66	.37
Not needed#	.36	.73	.86	.36
Eigenvalue	12.75	1.87	12.34	1.67
Percent Common Variance Accounted For	81.9%	12.0%	88%	12%

item is reverse scored

Related Theoretical Work and Framework for Testing the Emotional Side of Involvement

In a 1980 Journal of Advertising Research article, Vaughn outlined a theoretical perspective for viewing product categories which added a second dimension orthogonal to the notion of high and low involvement. The second dimension was one of thinking versus feeling. This model departs from the traditional model which implies that high involvement products require a thinking or cognitive orientation first, whereas low involvement products are more suited to an affective or non-informational appeal (Engel and Blackwell, 1982). The expansion of involvement along an orthogonal continuum from thinking to feeling allows a more complex approach which perhaps takes into account the excitement that accompanies certain purchases. Specifically, Vaughn (1980) proposed the following classification scheme for products:

FIGURE 1
FOOTE, CONE AND BELDING
PRODUCT CATEGORY CLASSIFICATION SCHEME



The first quadrant is high involvement/thinking and implies a large need for information because of the importance of the product and thinking issues related to it. In the second quadrant the product decision is involving, but specific information is less important than an attitude or holistic feeling toward the product. The third quadrant is low involvement/thinking and product decisions in this area are hypothesized to require minimal thought and a tendency to form buying habits for convenience. The fourth quadrant is the low involvement/affective and is reserved for those products that satisfy personal tastes (Vaughn, 1980).

The implication for advertisers is that the different quadrants require different types of advertising appeals. This notion is intuitively appealing because it allows for the emotional aspects frequently associated with certain products to be acknowledged and incorporated into the advertising strategy. Advertising copy for products perceived as informative, such as cars or new products, should focus on specific information. Advertising copy for habit formation products, such as food or household items, need only brand name reminder information. Affective products such as cosmetics or jewelry need emotional arousal in their advertising message, while self satisfaction products such as cigarette or liquor are thought to require ads which grab the receiver's attention. While I could find no empirical support for these propositions, it is likely that research is now being carried out to gather data on the question.

A very recent paper by Vaughn (1986) has tested out the product categorization scheme using three items to measure involvement: (1) very important/unimportant decision; (2) lot/little to lose if you choose the wrong brand; and (3) decision requires lot/little thought. The think/feel dimension was measured by two questions for think: (1) decision is/is not mainly logical or objective and (2) decision is/is not based mainly on functional facts; and three questions for feel: (1) decision is/is not based on a lot of feeling, (2) decision does/does not express one's personality, and (3) decision is/is not based on looks, taste, touch, smell or sound. Using these measures, Foote, Cone and Belding have classified product categories, brands and consumers into the four quadrants.

This paper also tests out Vaughn's product classification scheme but uses the Personal Involvement Inventory to do so. The thinking versus feeling dimension is replaced and measured by the amount of emotion found in the involvement measure. The emotional or affective side of involvement is represented by the factor loading of the word pair unexciting-exciting. The adjective of exciting is representative of the arousing aspect of emotion (Russell, 1983). The other word pairs of fascinating-boring or appealing-unappealing, which seemed to correlate with exciting on the PII, are not part of Russell's identified emotional adjectives and hence were not used. An independent judgement of the 20 PII items into emotional or rational categories proved unreliable across subjects. Hence this study measured involvement and then determined the emphasis placed on the emotional aspect perceived in the product through the word-pair unexciting-exciting to try and reconstruct Vaughn's (1980) classification scheme.

Method

Stimulus

Two product categories from each quadrant were selected for study. The high involvement/thinking category was represented by automobiles and personal computers. The high involvement/feeling category was represented by the product categories of diamond ring and cologne. The low involvement/thinking category was represented by ground beef and paper towels. The low involvement/feeling category was represented by the product categories of chocolate and cigarettes.

Subjects

A total of 230 subjects rated each product category. One hundred fifty three subjects were undergraduate business students, 90 females and 64 males,³ of which the median age was 21. Seventy-three were graduate business students; 33 male and 40 female, of which the median age 28.

Measuring Instrument

The Personal Involvement Inventory (PII) (Zaichkowsky, 1985) consists of 20 bi-polar adjectives which represent the involvement construct. Each item is rated on a seven point bi-polar scale. Adding up the responses from the 20 adjectives gives a possible low score of 20 and a possible high score of 140. Based on the average score obtained for the product, the product judged can be classified as either relatively high or low involving as perceived by the subjects. The derived mean for products is 90. Therefore product scores above 90 are considered relatively high involving product categories and scores below 90 are considered to represent relatively low involving product categories as perceived by the subjects.

By factor analyzing the 20 scale items, the weight given to the emotional component of involvement was determined by the factor loadings of the exciting item. These loadings should be between 0 and 1. An average loading below .5 would indicate a relatively low level of emotion and a loading between .5 and 1 would indicate a higher level of emotional involvement.

Procedure

Subjects were administered the Personal Involvement Inventory during the beginning of class time. Each subject rated all eight products and the order of product rating was randomized to control for fatigue and order effects. The total time taken to rate the products was about 10 minutes.

Results

The involvement levels of the eight product categories were tabulated over the total sample, as well as by sex and age group. These results are presented in Table 2 and the general pattern is in agreement with Vaughn (1980). Automobiles were perceived to be the most involving product category PII=131, while cigarettes were perceived to be the least involving product category PII=49. The other products thought to be low involving had average PII levels as follows: paper towels 83; ground beef 85; and chocolate 82. The high involvement product categories received the following PII scores: personal computer 108; cologne 99 and diamond ring 95.

Similar involvement scores were obtained across graduate and undergraduate subjects. The only significant difference between graduate and undergraduate students was in the involvement of diamond rings, with undergraduates being significantly more involved (M=99) than graduate students (M=86). More variation was observed between males and females within the product categories. For example, males rated their involvement with personal computers 112 while females rated personal computers 104 on the PII. Males rated diamond rings 81, whereas the females' average PII score was 105. This indicates males are more involved with computers than females and females are more involved with diamond rings than males.

³The sex of three respondents was unknown due to missing data

TABLE 2
MEAN PERSONAL INVOLVEMENT LEVEL BY
PRODUCT AND SUBJECT GROUP

Product:	Grand Total N=230	Total Grad N=73	Total U Grad N=157	Total Males N=97	Total Females N=130
1. Automobiles	131(10)*	130(11) _a	131(10) _a	132(10) _a	130(10) _a
2. Personal Computer	108(25)	109(25) _a	107(25) _a	112(19) _a	104(25) _b
3. Cologne	99(27)	94(32) _a	101(24) _a	91(27) _a	105(26) _b
4. Diamond Ring	95(29)	86(31) _a	99(27) _b	81(29) _a	105(26) _b
5. Paper Towels	83(23)	86(25) _a	82(23) _a	81(23) _a	85(24) _a
6. Ground Beef	85(25)	83(31) _a	86(22) _a	90(23) _a	82(26) _b
7. Cigarettes	49(36)	44(33) _a	51(37) _a	42(31) _a	54(38) _b
8. Chocolate	82(28)	81(29) _a	81(29) _a	74(25) _a	87(30) _b

* Standard deviations are in brackets after the PII score. Scores less than 90 are considered low in involvement. Subscripts a and b are significantly different from each other at $p < .05$. (Graduates are compared to undergraduates and males are compared to females.)

Testing for the emotional loading was carried out by factor analyzing the 20 adjective pairs for each product. A varimax (orthogonal) rotation was used to pull the groupings of adjective pairs as far apart as possible. The factor loadings for unexciting-exciting for each product are presented in Table 3.

TABLE 3
FACTOR LOADINGS OF UNEXCITING-EXCITING
ACROSS PRODUCTS FOR THE TOTAL SAMPLE

Product	Factor Loading Unexciting-Exciting	% Variance Accounted for by the First Factor
Auto	.17	80%
Personal Computer	.81	83%
Cologne	.79	94%
Diamond Ring	.79	87%
Paper Towels	.17	75%
Ground Beef	.24	90%
Cigarettes	.57	94%
Chocolate	.67	90%

These factor loadings are as expected, except for the product category of personal computers, with average exciting loadings of .81. However, as predicted, autos (.17), paper towels (.17) and ground beef (.24) were all low in emotion, while cologne (.79), diamond ring (.79) and chocolate (.67) were all relatively high on the emotional loading.

Next, these two aspects of involvement, the PII score and the factor loading for exciting, were plotted in a two dimensional space. The first PII dimension is plotted from 20 to 140 with the average level of product involvement judged at 90 (Zaichkowsky, 1985). The second dimension is the average emotion factor score and is plotted from 0 to 1 with mean .5. The plots for the females $N = 130$ and males $N = 97$ are in Figures 2 and 3. From these plots we can see that automobiles, personal computers, paper towels, ground beef and cigarettes were similarly perceived over both male and female subjects. The product category of diamond ring shifted from high involvement for females to low involvement for males. Cologne which was a high involvement affective product for women shifted to the low emotion side of involvement for men. Chocolate which was predicted to be a low involvement affective product shifted to the thinking or habitual space for women. Perhaps women perceive chocolate more in terms of the calories it represents rather than the sensual taste.

FIGURE 2
PLOT OF LOW VS. HIGH AND EMOTIONAL
INVOLVEMENT LEVELS - FEMALES

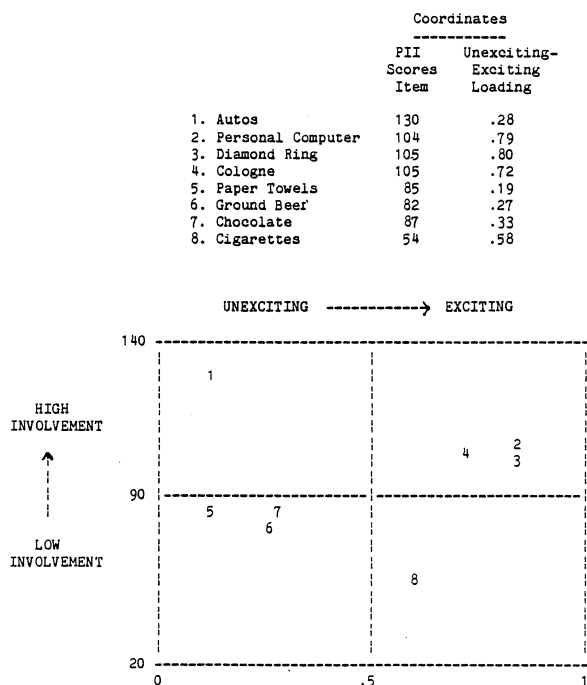
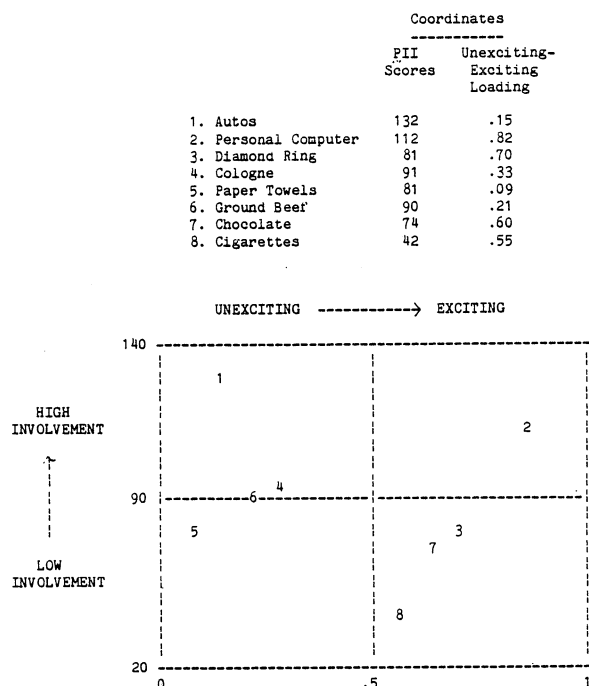


FIGURE 3
PLOT OF LOW VS. HIGH AND EMOTIONAL
INVOLVEMENT LEVELS - MALES



Discussion and Summary

The FCB model (Vaughn, 1980) for product classification was used as a framework for testing the use of the PII (Zaichkowsky, 1985). The results generally support the proposed product classification scheme. The consistent misclassification was in the product category of personal computers where they apparently were seen to have a great emotional or affective component in its perception. It may be that personal computers are viewed as an exciting, fascinating product category by the average student subject.

An important aspect to this paper is the variability among the males and females in their emotional perception of some product categories. Perhaps advertising chocolate to females should take on an informative role of calorie content. Can a calorie reduced chocolate bar be on the horizon? From these components of level of involvement and amount of emotion, some clustering of product users to brands of the product might be interesting.

The Next Step

The analyses presented in this paper represents a little science and some creativity. Psychometricians may cringe at the thought of taking a unidimensional measure and then pulling apart one item to determine the breadth of part of the scale. This whole exercise has led me to another rethinking of how to view and measure involvement, if indeed we agree that there is an emotional side to the construct. The next step in scale development is actually one backward to some of the original items for involvement which were eliminated after early rounds of data analyses. A wider range of stimuli needs to be judged against an unreduced scale and then the items should be reduced back to a smaller number. There are two main reasons for this further development process. First, from consumer demand and a practical point of view, it seems researchers want to use the scale many times at one sitting and, worried about subject fatigue, are ad hoc reducing the PII on their own. Fewer items might increase the ability to administer the PII many times to the same subjects in conjunction with lengthy questionnaires. However, the decision of which items to delete should be based on the same careful empirical work which developed the scale in the first place. Secondly, keeping with our theory of an emotional side to involvement, the reduced PII should have a consistently identifiable emotion component.

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THE ZAICHKOWSKY PERSONAL INVOLVEMENT INVENTORY:
MODIFICATION AND EXTENSION

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Abstract

A revised version of Zaichkowsky's (1985) Personal Involvement Inventory (PII) was developed and tested. Termed the RPII, the revision attempts to incorporate the multi-faceted perspective on involvement developed by Laurent and Kapferer (1985), and also to purge the PII of some potentially problematic scale items. Findings from 136 students who rated 12 products showed the RPII to be successful.

Introduction

The construct of involvement has been a central concern in consumer research over the past decade. Early work focused on a dichotomy of high and low involvement products, with the latter demanding a different model of how consumers process information and make choices (Kassarjian and Kassarjian 1979; Robertson 1976). Later efforts attempted to further differentiate the concept of involvement. Thus, Houston and Rothschild (1978) distinguished situational, enduring and response involvement, and Bloch and Richins (1983), writing on product importance, distinguished instrumental from enduring importance. Over time, definitions and distinctions proliferated, to the distress of some scholars. Cohen (1983) attempted to bring order by insisting that the antecedents and consequences of involvement be considered separately from the state itself. Rothschild (1984) declared that the conceptual elaboration of the involvement construct had reached a point of diminishing returns. He argued that a consensus had formed around a definition of involvement as "a state of arousal, interest or motivation," and that the new priority should be data collection and not further conceptualization.

During 1985, two milestones were reached in the effort to ground the involvement construct. Zaichkowsky (1985), in the *Journal of Consumer Research*, and Laurent and Kapferer (1985), in the *Journal of Marketing Research*, reported the development of methodologically sound measures of involvement. These authors were careful to measure the "state" of involvement, rather than relying on indicants associated with the antecedents and consequents of this state. The result in each case is a "multi-item" scale (i.e., inventory) which survived multiple tests of validity, and which is claimed to be of general applicability across product categories. These two inventories promise to be a significant contribution.

Therefore, one notes with consternation that these separate efforts have produced two very different inventories. The Personal Involvement Inventory (PII) of Zaichkowsky treats involvement as a unidimensional construct; its 20 items are summed to produce a single score. Whereas, Laurent and Kapferer are adamant that involvement is multi-faceted, and claim that an Involvement Profile (IP) is required. They argue that a consumer's involvement cannot be expressed in a single score, because the type of involvement is as important as its level. Their 20 item scale (1985) taps four facets of involvement: perceived importance, decision risk (probability of making a mistake), sign value (whether a product reveals the consumer to other people), and a pleasure component. Only the first, and to some extent the last of these facets is represented among the items comprising Zaichkowsky's PII. While the two inventory development efforts did use different types of items (semantic differential in the PII and Likert in the IP), and different populations, the high standard of rigor adhered to in both efforts makes it difficult to explain away their divergent results on methodological grounds.

The problem is conceptual: Is involvement with a product category one thing, or many? We find Laurent and Kapferer's (1985) arguments for their IP persuasive. They point first to the tendency of researchers and managers to use involvement in association with various qualifiers: situational or enduring, personal or emotional, and so forth. Second, each of their four facets can be convincingly related to arousal, which Cohen (1983) has argued is the fundamental constituent of the state of involvement. Perceived importance, decision risk, psychosocial risk (sign value), and pleasure are all plausible sources of a greater or lesser degree of arousal. Third, their analyses demonstrate both that individual products will be ranked differently on the four facets.

Despite these good conceptual arguments for the use of the IP rather than Zaichkowsky's PII in studies of involvement, there remain two problems: (1) the full IP has never been published; (2) while the text of the measure could doubtless be obtained from the authors, there is no guarantee that translations of the 20 Likert statements into English will yield the same item structure as the French originals. Given that additional work would in any case be required before the Involvement Profile could be widely used in this country, it seems worthwhile to ask whether Zaichkowsky's Personal Involvement Inventory could not instead be adapted to reflect a more multi-dimensional perspective.

The primary goal of the current study is thus to modify the PII so as to produce a measure that will incorporate risk and sign-value components, as well as perceived importance and pleasure. Our objective is to maintain as much continuity as possible with the existing measure, while still incorporating the necessary additional material. As we did not want the final revised version to exceed the length of the present PII, it was necessary to determine candidates for elimination from among the PII's original items. A conceptual critique of the PII was developed to guide these choices; we were mindful of the strictures placed by Zaichkowsky on investigators seeking to shorten or otherwise revise the scale (footnote 1, p. 344).

Critique of the Personal Involvement Inventory

Examination of the PII's scale items alerted us to the possibility of interpretational confounding. In general terms, interpretational confounding "occurs as the assignment of empirical meaning to an unobservable variable which is other than the meaning assigned to it by an individual a priori to estimating unknown parameters" (Burt 1976, p. 4). The PII seems to include two distinct groups of adjectives. One group contains items that would possess high face validity as indicants of involvement, prior to any empirical validation work (e.g., "interesting-boring"). But the other group contains terms with quite different connotations (e.g., "beneficial-not beneficial," "valuable-worthless"). In other words, the PII contains some adjectives classically associated with a state of involvement, and others normally associated with the measurement of attitude. Empirically, Zaichkowsky (1985) found all these terms to be highly consistent (coefficient alpha ranged as high as .97); but conceptually, they represent two different constructs. Thus, we suspect that interpretational confounding may be present in the form of attitudinal contamination. While a measure of involvement should be distinct from a measure of attitude, it is not clear that the PII satisfies this test (Peters and Churchill 1986).

If interpretational confounding is present in the form of attitudinal contamination, then the PII can be expected to overestimate consumers' involvement with certain types of products, particularly those that can be liked or endorsed without being experienced as arousing or interesting. Accordingly, this overestimation may be most marked for what might be termed "humble products;" i.e., everyday items which, while indispensable, are of no great importance in themselves. Conversely, it may not occur, or be noticeable, for those products which are not used by everyone, nor considered necessities; i.e., the special interest category of Lastovicka and Gardner (1979). Here attitudinal terms like "needed" or "essential" may be expected to reflect involvement equally well as arousal-based terms such as "interesting" or "exciting."

There is suggestive evidence that interpretational confounding does occur when the PII is used to scale the involvement level of various product categories. Zaichkowsky found laundry detergent to be the third most involving product among the 14 she examined. She defends these results in terms of the presumed central role of detergent in the lives of a "relatively homogeneous group of middle-aged females" (p. 346), contrasting this with the peripheral role played by a technical appliance such as a color television. Her point has merit, but remains troubling, given the exactly opposite results reported by Kapferer and Laurent (1984) and Laurent and Kapferer (1985), in two separate, large studies of French housewives. In the latter one, detergent was the lowest-scoring product on all four facets of involvement; in the former, it was among the lowest; and in both studies, detergent scored much lower than television.

While our major criticisms of Zaichkowsky's (1985) PII concern the absence of a multi-dimensional approach and the danger of attitudinal contamination, we would also note two other potential problems. First, one might question the appropriateness of terms such as "superfluous" and "mundane" if the measure were to be applied outside a University setting. In general, the syllable count for the PII seems uncomfortably high. Second, some terms in the PII appear to be redundant (e.g., "interesting-boring" and "interested-uninterested" are both included).

Despite these criticisms, the extensive and laudable validation work performed by Zaichkowsky argues for a revision of the PII rather than its abandonment. We sought both to keep the best of her item pool, and to replace potentially problematic terms.

Method

Development of the Instrument

Four of the 20 item pairs in the PII were discarded on a priori grounds: "superfluous-vital," "mundane-fascinating," "significant-insignificant," and "fundamental-trivial." All seemed inappropriate for use with a non-college educated population. Eight new item pairs were devised. Since the PII already had many items reflective of perceived importance of hedonic value, the new items were designed to reflect the facets of decision risk or sign value (the one exception was "fun-not fun"). The 16 old and 8 new item pairs were arranged as shown in the Exhibit.

Unfortunately, preliminary analyses indicated that the four item pairs designed to measure sign value did not cohere as a single factor. The problem lay with the third and fourth pairs listed (i.e., "heed others' wishes" and "my own business"), which were relatively uncorrelated with any of the other 22 item pairs. Perhaps they tap a joint decision-making dimension, rather than sign value. The two remaining pairs ("says something about me" and "tells me about a person"), taken directly from Kapferer and Laurent (1984), were found to have high loadings on the pleasure factor, and did not constitute a separate factor by the minimum eigenvalue test (i.e., $\lambda \geq 1.0$). This is not surprising, since the sign and pleasure facets had the highest inter-correlation in Laurent and Kapferer (1985). These latter two items were therefore incorpo-

rated into the pleasure sub-scale in the present analysis. In the discussion below, "RPII" and "OPII" refer to two overlapping subsets of the 22 remaining scale items, as shown in the Exhibit.

Subjects and Procedure

The semantic differential instrument shown in the Exhibit was completed by 80 undergraduate and 56 MBA students.¹ After one week, 67 of the 80 undergraduates completed a form which measured the consequences of involvement (described below). Lastly, four weeks after the initial administration of the semantic differential instrument, 52 undergraduates completed the 22 scale items in the Exhibit a second time for automobiles and toothpaste. Thus, 104 cases were available for testing the stability of the RPII and OPII over time.

Criterion measures

Five criterion measures, modeled after those used by both Zaichkowsky (1985) and Laurent and Kapferer (1985), were developed to assess various consequences of involvement. As noted by these authors, a higher degree of involvement should produce: 1) greater information search; 2) greater complexity of choice processes; 3) greater brand commitment; and 4) greater differentiation of brands. The first of these was assessed with the following two items, each measured on a five-point Likert scale: "I would be interested in reading about this product," and "I would pay attention to an ad for this product." The second consequence was measured using a single five-point Likert item: "I would compare product characteristics among brands." Inasmuch as all three of these items were found to be highly correlated (.66, .53 and .55, respectively), they were summed together (coefficient alpha = .81). Brand commitment was measured as the degree of liking for the brand now owned or regularly used (seven-point semantic differential, anchored by "like" and "dislike"). Brand differentiation was measured as the number of acceptable brands in the product category, with five response options: mine only, a couple, several, many, all. This measure was reverse-scored: the fewer the acceptable brands, the greater the brand differentiation.

Results

Reliability

Table 1 shows internal consistency estimates for the inventories and sub-scales, and also their inter-correlations. Consistent with Zaichkowsky (1985), the OPII was found to exhibit a very high degree of internal consistency (.95). But, despite being composed of 3 sub-scales, the RPII also exhibits more than satisfactory internal consistency (.93). It should be noted, however, that this high alpha coefficient does not necessarily imply that the RPII (or OPII for that matter) is unidimensional. It is possible to have a high alpha for a scale which has two or more dimensions. Therefore, a subsequent factor analysis (discussed below) was used to assess dimensionality.

Within the RPII, the importance and pleasure sub-scales are very consistent, while the risk scale is somewhat less so. This same pattern was observed by Laurent and Kapferer (1985). Additionally, the inter-correlation of the importance and pleasure sub-scales is similar to that found by Laurent and Kapferer (1985); however, our measure of decision risk is more closely related to the other two sub-scales than was the case in their studies. The inter-correlation of the OPII and RPII inventories is quite high

¹Although each student rated a total of 12 stimulus objects, two separate lists were used, so that in all 24 objects were rated. Some of these ratings (e.g., of issues--cf. Hupfer and Gardner 1971) were taken for a different purpose and are not discussed here. As a result, the number of valid cases (students X products minus missing cases) is 899 for the analyses reported in Tables 1 and 2 and Figure 1, and 449 for those reported in Table 3.

TEXT OF SCALE ITEMS COMPLETED BY RESPONDENTS

INTERNAL CONSISTENCY AND INTER-CORRELATION OF INVENTORIES AND SUB-SCALES

Scale Items	Assignment	
	OPII ^a	RPII ^b
IMPORTANT / UNIMPORTANT	X	X (1)
OF NO CONCERN / OF CONCERN TO ME	X	X (1)
IRRELEVANT / RELEVANT	X	X (1)
MEANS A LOT TO ME / MEANS NOTHING TO ME	X	X (1)
DOESN'T MATTER / MATTERS TO ME	X	X (1)
NO RISK / RISKY		X (2)
EASY TO GO WRONG / HARD TO GO WRONG		X (2)
HARD TO PICK / EASY TO CHOOSE		X (2)
UNINTERESTED / INTERESTED	X	
APPEALING / UNAPPEALING	X	X (3)
BORING / INTERESTING	X	X (3)
UNEXCITING / EXCITING	X	X (3)
FUN / NOT FUN		X (3)
SAYS SOMETHING ABOUT ME / SAYS NOTHING ABOUT ME		X (4)
TELLS ME ABOUT A PERSON / SHOWS NOTHING		X (4)
HEED OTHERS' WISHES / CHOOSE WHATEVER I WANT		d (4)
MY OWN BUSINESS / IMPORTANT TO OTHERS		d (4)
USELESS / USEFUL	X	
VALUABLE / WORTHLESS	X	
BENEFICIAL / NOT BENEFICIAL	X	
ESSENTIAL / NONESSENTIAL	X	
UNDESIRABLE / DESIRABLE	X	
WANTED / UNWANTED	X	
NOT NEEDED / NEEDED	X	

	Inventories		RPII Sub-Scales		
	OPII (16)	RPII (14)	Importance (5)	Pleasure (6)	Risk (3)
OPII	.95				
RPII	.87	.93			
Importance	.93	.85	.95		
Pleasure	.69	.90	.60	.92	
Risk	.44	.67	.41	.49	.77

NOTE: Boldfaced numbers on the diagonal represent coefficient alpha for the individual inventories and sub-scales, while those below the diagonal are the inter-scale correlations. Numbers in parentheses beneath the column headings give the number of items in each inventory or sub-scale.

(Table 2). Regarding the OPII, we found, as did Zaichkowsky, one major and one minor factor, which here accounted for 60% and 15% of the total explained variance. However, it is clear that the major factor reflects attitude more than involvement; the highest loadings are for the scale items "needed," "essential," and "beneficial." Items such as "interesting" load mostly on the second factor. To the extent that a simple sum reflects primarily the first factor, and to the extent that terms typically associated with involvement do not load heavily on that first factor, the OPII may not truly reflect the construct of involvement. The question of whether this is a practical or only a theoretical problem is deferred until the section on scaling of products below.

The results for the RPII are encouraging. Three factors were retained, accounting for 54%, 13% and 10%, or 77% in total, of the explained variance. The rotated loadings show that simple structure obtains, and that each item loads on the expected factor. These loadings are both more homogeneous, and somewhat higher than those reported in Laurent and Kapferer (1985). To test the generalizability of these results, we separated the sample into undergraduate and MBA groups, and redid the factor analysis of the RPII for each group separately. The MBA students were enrolled in an evening program, and compared to the undergraduates, were generally older, employed full-time, and more likely to be married. A comparison of the factor structures for the two groups showed both the same simple structure, and also very little difference in the loadings for individual scale items. As was the case with the reliability analyses, these factor analyses add to our confidence that the RPII holds promise as a replacement for the OPII.

Scaling of Product Involvement

If the OPII does suffer from attitudinal contamination, then this should be manifest as an overestimate of the involvement associated with certain product categories. Figure 1 shows the 12 products investigated, ordered from lowest to highest, based on their involvement score on the RPII. These scores are plotted by the solid line. The dashed line plots the scores of each product on the OPII. Deviations between the two lines indicate products which are scaled differently by the two measures. Visual examination of Figure 1 provides suggestive evidence of interpretational confounding in the OPII. Overestimation, relative to the RPII, occurs in exactly those cases --detergent, motor oil and toothpaste--where it was pre-

^aThese 16 items were taken from the 20 item Personal Involvement Inventory described in Zaichkowsky (1985).

^bThese 14 items make up the authors' Revised Personal Involvement Inventory.

^cThe parentheses show, for items in the RPII, whether the item was designed to tap, respectively, the 1) importance, 2) risk, 3) pleasure, or 4) sign-value facet of involvement.

^dItems which were dropped from subsequent analyses. See text for explanation.

($r = .87$), as would be expected given the substantial scale overlap between the two. This degree of association shows that we were successful in maintaining comparability with the OPII.

The test-retest results were more disappointing. However, the correlation between the two administrations of the RPII (.80) was higher than that of the OPII (.69). Test-retest correlations for individual items ranged from .20 to .74 for the OPII, and from .20 to .75 for the RPII. These numbers are lower than the .88 to .93 range reported by Zaichkowsky for the total 20 item inventory, and the .60 to .93 range she reported for individual items. Several plausible explanations for the lower numbers in the current study exist: the longer time frame between test and retest; greater heterogeneity in the circumstances of inventory administration (i.e., completed outside the classroom); fewer people and fewer products tested; differences in the set of products that was examined; and, of course, the fact that only 16 of Zaichkowsky's 20 items were included in the OPII.

On the basis of the internal psychometric criteria discussed above, we can conclude that the RPII is on a par with the OPII. In addition, it appears that our importance, pleasure and risk sub-scales are on a par with those developed by Laurent and Kapferer.

Factor Structure of the RPII and OPII

A principal components analysis with varimax rotation of all factors with eigenvalues greater than one was performed for each involvement inventory separately

TABLE 2

ROTATED FACTOR LOADINGS FOR THE OPII AND RPII

Item	OPII		Item	RPII		
	Factor 1	Factor 2		Factor 1	Factor 2	Factor 3
Needed	.88		Relevant	.89		
Essential	.88		Important	.88		
Beneficial	.88		Of concern	.86		
Useful	.82		Matters	.86		
Valuable	.81		Means a lot	.84		
Important	.73	.48	Fun		.86	
Wanted	.72	.40	Interesting		.85	
Relevant	.69	.52	Exciting		.85	
Desirable	.66	.46	Appealing		.79	
Means a lot	.65	.59	Says something about me		.66	
Matters	.64	.57	Tells about a person		.66	
Of concern	.62	.55				
Interesting		.90	Easy to go wrong			.85
Exciting		.89	Risky			.76
Appealing		.86	Hard to pick			.74
Interested		.83				

NOTE: Omitted loadings are less than .35. Only the positive pole of each item pair is given here; see the Exhibit for the complete text.

dicted: "humble but useful products" that everyone consumes. However, the RPII and OPII are in substantial agreement regarding most of the products examined. For instance, they are equally effective in determining that business suits are more involving than soft drinks (Figure 1). What emerges is that the OPII may systematically err in estimating the degree of involvement for certain products vis-a-vis others. This finding, of course, holds true only to the extent that the ordering of products due to the RPII does not also, in the reader's eyes, suffer from interpretational confounding.

Prediction of the Consequences of Involvement

The final comparison of the OPII and RPII concerns their ability to predict some of the consequences which are supposed to follow from involvement: greater brand commitment, greater brand differentiation, and more information search and choice complexity. Regression analyses were used to compare the degree of association between the OPII and the consequences of involvement with that between the three sub-scales of the RPII and the consequences of involvement. If involvement is multi-faceted, as Laurent and Kapferer claim, then inclusion of each of the sub-scales in the regression analyses should explain more variance than when the OPII is entered as sole predictor. On the other hand, if Zaichkowsky is correct and involvement is unidimensional, then the more psychometrically powerful OPII measure, consisting of 16 highly consistent items, should be more successful than the three "fragments" of involvement represented by the RPII sub-scales.

Three regressions were run for each consequence of involvement (Table 3): 1) one where the OPII was the only predictor variable (left most column); 2) one where the three RPII sub-scales were the only predictors (column 2); and 3) one where the three sub-scales were added to an equation containing the OPII, and the increment in explained variance determined (in-text tabulation). Looking at the first and second columns, in every case the three sub-scales of the RPII are equal to or superior to the OPII in explaining variation in the consequences of involvement. Since a comparison of single and multiple correlations is inherently unfair, it is important to note that even when the OPII is entered first into the regression equation, the sub-scales are able to explain significant additional variation when they are added (R^2 increments = .023, .023 [$p < .01$] and .060 [$p < .001$], respectively, for the three criteria). This is the more

remarkable because of the substantial overlap in item content. The inference must be either that involvement is best treated as multi-faceted, or that the OPII contains items which contribute noise rather than signal. Probably both are true.

As predicted by Laurent and Kapferer, the beta coefficients for the individual sub-scales vary across the consequences of involvement. Importance (Table 3, column 3) is strongly predictive of brand commitment and brand differentiation, while pleasure (column 4) is the best predictor of information search and choice complexity. Decision risk (column 5) is the weakest of the three sub-scales, a finding also reported by Laurent and Kapferer (1985). However, it does show a significant inverse relation to brand commitment, and a significant direct relation to information search and choice complexity. (Because multicollinearity among the predictors can make for unstable beta coefficients, we split the sample in half and recomputed these regressions. The relations just described continued to hold for both sub-samples.) Allowing for some differences in the way the consequences of involvement were measured, both the pattern and the level of the associations between the sub-scales and the measures of consequences are comparable to those reported in Laurent and Kapferer (1985). The same holds true for the size of the associations involving the OPII, in comparison to those reported by Zaichkowsky (1985).

Discussion

Investigators who require a measure of enduring involvement with a product category are encouraged to consider this revised version of the Personal Involvement Inventory (RPII), as a viable alternative to Zaichkowsky's (1985) original version. The high correlation between the revised and the original version gives confidence that the extensive validation work performed by Zaichkowsky supports the revised as well as the original version. At the same time, the sub-scale structure of the RPII allows one to incorporate the perspective of Laurent and Kapferer (1985), and to benefit from their validation efforts. In addition, the RPII appears to offer several practical advantages over Zaichkowsky's PII. Its substantially shorter length (14 vs. 20 items) should yield some cost economies due to reductions in questionnaire length, interview time, and respondent fatigue.

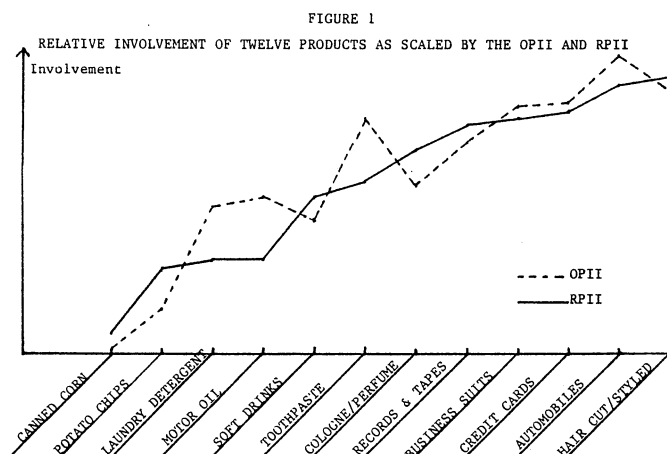
TABLE 3

REGRESSION ANALYSES: OPII AND RPII SUB-SCALES
REGRESSED ON CONSEQUENCES OF INVOLVEMENT

Consequence	Importance, Pleasure, Risk		Importance Pleasure		Risk (c)
	OPII (r)	Risk (R)	(c)	(c)	
Brand commitment	.35 ^b	.36 ^b	.26 ^a	.20 ^b	-.15 ^a
Brand differentiation	.15 ^b	.22 ^b	.25 ^b	-.04	-.10
Information search & choice complexity	.54 ^b	.57 ^b	.19 ^b	.36 ^b	.11 ^a

NOTE: The columns refer, respectively, to the simple correlation (r) between the OPII and the consequences, the multiple correlation (R) between the RPII sub-scales and the consequences, and the standardized beta coefficients (c) for the individual scales.

^a $p < .01$; ^b $p < .001$



However, a few cautionary notes appear in order. Although the RPII receives support, since it was not compared directly against the original it would be premature to declare it better than the OPII. The extent to which any inventory is "better" than another is dependent upon the specific needs of the researcher. In the current study, Zaichkowsky's original inventory was shortened for two primary reasons: 1) the necessity to reduce respondent fatigue when collecting involvement ratings on numerous stimuli from the same individual; and 2) our expectation that many non-college educated respondents might not understand the meaning of specific scale items. This expectation, however, remains an empirical question; future research might compare the suitability of the PII and the RPII on populations with diverse demographic characteristics.

Future research might also be devoted to the development of standardized measures of the consequences of involvement. We found it disconcerting to have to judge the merits of two multi-item scales--the RPII and OPII--using single-item measures of the consequences of involvement. Further refinement of measures of the involvement construct itself may not be possible until better measurement procedures for the antecedents and consequences of involvement are developed.

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A FRAMEWORK FOR RELATING CONSUMER INVOLVEMENT TO LATERAL BRAIN FUNCTIONING

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Abstract

The past literature on involvement and hemispherical specialization has advanced two hypotheses: i) high (low) involvement induces left (right) brain processes, and ii) print (TV) is dominantly processed in the left (right) brain. Both these assumptions are questioned here. We base our argument on a recent view of involvement, namely that involvement can be cognitive or it can be affective. We develop this conception further, and then link it to left/right brain dominance via a chain of intermediate processes. Our conceptual framework: a) assigns high-involvement to both hemispheres, and b) predicates left/right brain engagement upon the type of involvement a stimulus engenders regardless stimulus modality.

Introduction

Brain-wave measures of advertising processing have in recent consumer research received increased attention (Olson and Ray 1983; Alwitt 1983; Rothschild and Thorson 1983). A well-established theory in neuropsychology is that the left and right halves of the human brain process information differently (see Moscovitch 1979 for a review). Some advertising researchers have subsequently proposed correspondence between differential brain activity and a) exposure to print versus TV; b) low versus high consumer involvement. Since involvement has been demonstrated to be an important mediator of consumer behavior, linking involvement to differential brain activity would provide researchers new capability to unobtrusively measure advertising effects. This potentially fruitful line of theorizing has not been adequately pursued, however. The purpose of the present paper is to develop a conceptual framework of the relationship between involvement and hemispherical lateralization.

Existing Theory

Krugman (1977) was the first marketing researcher to propose that the "medium of print is a left-brain function and TV largely or relatively a right-brain function." Krugman went on to suggest, "I would add to that my own views that high involvement is more a left-brain, and low involvement a right-brain activity." Krugman's was a heuristic, general essay on the cultural impact of mass media. He could not have offered empirical support for his hypothesis, for none was available then.

In a comprehensive survey of marketing applications of the lateralization theory, Hansen (1981) followed Krugman and stated that "in terms of hemispherical specialization, this should imply that in low involvement situations, right brain processes dominate, whereas higher degrees of involvement give rise to left-brain processes." As support, Hansen cited the theory that left-brain specializes in verbal, cognitive, attributional information processing whereas right-brain specializes in nonverbal, pictorial, holistic perception. This theory about brain-lateralization is well supported, of course (see Olson and Ray 1983, Rothschild and Thorson 1983, and Tucker 1981). Critical to Hansen's equation of high/low involvement with left/right brain dominance is this implicit assumption: low involvement generates noncognitive, nonverbal, pictorial, holistic processing, whereas high involvement

generates verbal, cognitive, attributional processing of information. As Stephens (1985) has pointed out, this assumption seems oversimplistic and is examined below in view of some recent developments in involvement theory.

Involvement

Although there are diverse conceptions of involvement in the literature (see Antil 1984, and Muncy and Hunt 1984, for recent reviews), Hansen's own definition is quite appropriate. Hansen (1981) defines involvement as "variations in the extent to which the individual is more or less motivated toward a specific piece of information, product, or the like." He goes on to say that with high involvement, "more psychic energy is released for handling incoming information, sorting it out, and making choices." This view of involvement is appealing for several reasons. First, it is quite congruent with some major, recent definitions advanced by involvement researchers (Cohen 1983; Mitchell 1981, Park and Mittal 1985). Second, it is general enough to apply to the viewing of an advertisement, product use, or purchase task. Third, it defines involvement in terms of motivational energy, and not in terms of information processing.

Because involvement is motivational energy brought to bear upon whatever task is at hand, such energy can be characterized along a "level" (i.e., low/high) dimension and also along a dimension that recognizes differences in the underlying motives. Regarding the latter, although there are various classification schemes of motives, Park and Mittal (1985) have found McGuire's (1974) broad grouping of motives into cognitive and "affective" categories to be particularly useful. Accordingly, they have put-forth the idea of cognitive and affective types of involvement. Elsewhere (Mittal 1982, 1983; Park and Mittal 1985) we have specified that affective-involvement obtains when psycho-social interpretation of the stimulus is pertinent to one's goals. Such psycho-social appraisal proceeds with the consideration of overall social image of the stimulus, or experience of hedonic satisfaction or emotional experience. This contrasts with the cognitive, information processing paradigm where information about performance levels on some functional criteria is assumed to be considered. AT&T's commercial which depicts an emotionally moved mother ("He said, 'I called you, Mom, because I love you'") is a case in point. That commercial is purported, it would seem, to induce affective involvement in the viewer. If and when the viewer is moved by the commercial, he/she would be in a heightened state of arousal. In approaching/avoiding the long-distance-call decision in that state of mind, he/she may find himself/herself incapacitated for logical thinking, as high arousal interferes with problem solving task performance (Berlyne 1978). Moreover, the "cold cognitions" about the choice alternatives (i.e., the cost of the call, the past month's phone bill, the current month's budget, availability of things to say, etc.) would be overshadowed or made less salient by the experience of an overwhelming, global, intense emotional reaction.

The above effect was vividly demonstrated by Park and Young (1986) who induced in their subjects low, high-cognitive, and high-affective involvement. They found that the high-affective involvement group generated

substantially less cognitive responses than did the high-cognitive involvement group. This result is explained by positing that in the affective-involvement condition as opposed to the cognitive-involvement condition, products, brands, advertisements, or other stimuli are processed holistically without much attention to the specific, disparate features. Hansen assumes that holistic, gestalt-like processes (which no doubt predominantly occur in the right-half brain) represent low-involvement conditions. It now seems logical that these holistic processes could be high-affective involvement processes.

One obvious context where affective rather than cognitive involvement would be expected is that of experiential or hedonic consumption. Dwelling on experiential/hedonic consumption, Hirschman and Holbrook (1982) advance propositions which would link affective involvement to right-brain processes quite readily. These authors view hedonic consumption as being tied to the imaginative construction of reality. The imaginative construction entails multi-sensory imageries and fantasizing. In the selection of brands of symbolic/hedonic products, therefore, a consumer appraises brands holistically via multi-sensory imageries. The consumer is affectively involved, and his involvement is high, not low. Involvement is high because the consumer is emotionally aroused, and, to borrow another of Hirschman-Holbrook propositions, there is generated "substantial mental activity on the part of the consumer." This mental activity would occur predominantly in the right-half brain because most normal-brained, right-handed humans have been found to possess a right-hemisphere advantage for emotional and imagery experience (Moscovitch 1979, Nevid 1984).

A Framework of Correspondence between Involvement and Hemispherical Lateralization

Table 1 presents a framework that relates the types and levels of involvement to hemispherical specialization via a chain of intermediate processes. First, 3 categories of involvement are distinguished: high-cognitive, high-affective, and low involvement (i.e., low in cognitive and low in affective involvement). See Column 1.

In column 2 are described aspects of the stimuli that are relevant to the 3 categories of involvement. As is logical, when the involvement is of the high-cognitive type, the product's performance dimensions or information about product-features are of utmost relevance. When the involvement is of the high-affective type, the product's image-dimensions and the emotional or image situation contained in an advertisement are relevant. If neither performance nor image dimensions are significantly important, then low involvement occurs.

The third column describes as to what aspects of the stimuli are processed. By "processed" is meant "attended to," "encoded," or "utilized." Entries in this column follow closely those in column 2 for the high-affective and high-cognitive involvement cases. The entry for the low-involvement case needs some clarification. A consumer may attend to a single feature or so if the information about it is readily available (Rothschild 1979). Or, he/she may form a quick, vague and shallow impression of the product. In many cases the information about the single feature attended to may constitute the vague image. In other cases, the vague image may be tied to no discernible feature. A brand of salt may be processed, for example, by promptly noting that it is iodized and hence desirable; or it may be chosen simply because an avoidance-disposition was not experienced. Now, the brand selection of salt can be viewed as a low-cognitive

involvement task due to a utilitarian motive underlying its purchase. A greeting card may, on the other hand, be a low-affective involvement product for many consumers. (For some consumers in some situations, it may be a high-affective involvement product.) The greeting card may be chosen, then, by checking that its message is relevant or that it is not too costly; alternatively it may be chosen because it looked like a "fairly attractive" card. In other words, either an objective feature or two may be processed or a quick, rough impression might be formed as prelude to the card selection. It may be tempting to link low-cognitive involvement with the processing of a single feature and low affective involvement with the vague, shallow image formation. But this view would seem to be oversimplistic, and as the salt and card examples cited above show, either type of processing may occur for low-cognitive, and likewise for low-affective involvement. Presently, we simply do not know enough to make categorical statements one way or another, and therefore leave the low-involvement category as undifferentiated.

Moving further on in Table 1, column 4 describes the extent of mental activity. Suffice here to note that mental activity is expected to be high for high-affective involvement as well as for high-cognitive involvement. (There is no need to equate mentalism with cognitivism!)

Now, some clarification of terminology is in order. Following Zajonc (1980), affect is viewed as an approach/avoidance tendency. Therefore, the attitude that is typically modeled in multiattribute models (c.f. Wilkie and Pessemier 1973) is a kind of affect. To distinguish it from emotion, for example, emotion is labeled as "hot" affect, and multi-attribute attitudes as "cold-affect." Hot-affect is an attitude which cannot be decomposed into its componential attributes. It may be proper, too, to attach an intensity dimension to affect so that affect may be not merely cold or hot but also weak or strong. In the social judgment paradigm (Sherif and Hovland 1961), such intensity is operationalized by latitude of acceptance/rejection.

In column 5, we hypothesize high-cognitive involvement to engender feature cognitions, i.e., brand beliefs; and through a synthesis of these brand beliefs, strong, cold affect is produced. In the high affective-involvement condition, rich imagery is produced, encoding is global and sensory, and this imagery evokes strong, hot affect. Finally, in the low-involvement condition (low-cognitive and low-affective), shallow cognitive processing (i.e., the processing of the most easily accessible feature information) may occur or a surface level general image may be formed. Consequently, very weak cold affect or very weak hot affect will be expected. Once again, not enough is known to make more definitive statements about this condition.

Finally, Column 6 specifies the engagement of the left/right brains. In the high-cognitive involvement condition, the left-brain is engaged dominantly and the right-brain moderately. In the high-affective involvement condition, the right brain is engaged strongly, and the left-brain moderately. In the low-involvement condition, both the hemispheres are engaged minimally. In the high-cognitive involvement condition, we posit the engagement of the right-brain to accommodate the strong cold affect generated in this condition. Because this affect is cold, we assume that the right brain is engaged only at a moderate level. In the high-affective involvement condition, the right brain is assumed to be engaged deeply due to the high hot affect which this condition engendr. But we also assume that the left brain is also engaged, although

moderately. This is because any object or stimulus which causes an intense hot affect to be experienced will also cause at least a few cognitions or beliefs. If you immensely like someone, you might allow yourself to believe that he is intelligent, for example. Such a cognition might even be an afterthought. Although it may not necessarily be produced, it seems intuitively plausible, and therefore one must allow for it. The simultaneous engagement of the two brain-halves (although to differing degrees) is compatible with and may indeed be required to accommodate the evidence that the two hemispheres constantly communicate with each other in "normal" humans (see Katz 1980).

Now, to capture the dynamic nature of brain processes, a time dimension is incorporated and hypothesized brain-wave patterns are shown in Figure 1. A pattern marked by early onset and longer persistence of a more intense (i.e., of greater amplitude) brain-wave will be termed "primary," and a less marked pattern "secondary."

Panel 1 of Figure 1 shows the progression of the left and right brain processes as a stimulus is processed in the high-cognitive involvement condition. Here, the left-brain process is hypothesized to be the primary process whereas the right-brain shows a secondary process. In column 5 of the table a time sequence is implied between the mental activities specified there. Congruent with the multi-attribute models of attitude, the strong, cold affect is assumed to follow upon the formation of brand-beliefs which precede such affect. Therefore, the left-brain processes must precede in time the right-brain processes. Also, they begin, at a fairly high level. At some point during the processing, the left brain processes are assumed to peak, presumably when the associative belief network (Mitchell 1983) has grown dense. The engagement of the left-brain is assumed to taper off as it completes its task of synthesizing the multiple beliefs and transfers the resulting overall affect to the right hemisphere. The right-brain process is assumed to peak at this point, although even at its peak, it is only moderate in magnitude.

We allow some engagement of the right-brain from the very beginning in the high-cognitive condition, and, likewise, some engagement of the left-brain from the very beginning in the high-affective condition. See Figure 1. This is at least for two reasons. First, the modality of the stimuli (i.e., verbal or visual; print or TV) will influence the initial engagement of the left or right brain. Such engagement, necessary for initially attending to the stimulus, need not be at a high level, however. Nor need it be permanent or on-going. Beyond the initial, quite a low level of engagement, which hemisphere is engaged will depend upon the type of involvement condition rather than modality. Thus, a verbally presented message can be highly affect-laden and can engender strong hot affect. Likewise, a pictorially presented message may dwell entirely upon feature specific objective informa-

tion, and thus engender brand-beliefs first and cold affect thereafter. The second reason is that it is not reasonable to entirely separate the cognitive and affective effects of communication. Various hierarchy-of-effects models (Smith and Swinyard 1982, Park and Mittal 1985) prescribe a sequence of these effects only because they assume a "macro" time-frame. In contrast, discussions of brain-processes require a "micro" time frame; indeed, brain wave measures are taken continuously and can be analyzed by time units of fractional seconds if desired. In this micro time-frame, the two effects (namely, the experience of affect, and the formation of a belief) must be posited to occur in an intertwined manner

To illustrate, as one attends to a highly informative advertisement, for example, it seems inevitable that one will have formed some "impression" of the stimulus at the outset. Affect is an approach/avoidance tendency, and in order for someone to continue attending to the information in the 'ad', an "approach" disposition must have already been formed. This "approach" disposition (or "affect," that is) might be tentative, and one may hold in abeyance one's "final" attitudinal judgment until all the brand beliefs are formed and processed. But affect, low level as it is, is experienced none the less, and, correspondingly, the right-brain is engaged from the very beginning.

For the same reason, in the high-affective involvement condition, (see Panel 2), the left-brain is assumed to be engaged (at modest levels) from the very beginning. Even when a communication begins with an affect-laden scene (e.g., a sexy model), the viewer may generate a cognition (e.g., "that model is tall," or "this must be an 'ad' for a brand of shampoo"). From as much as we know about the complex interrelationship between cognition and affect (see Zajonc and Marcus 1982), the safest statement we can make about the occurrence of cognition and affect is that on a micro time frame typically used for brain-wave measures, the two processes are intertwined. Therefore, both hemispheres are always engaged.

For the high-affective involvement condition (see Panel 2), the right-brain process may show peaks and troughs depending upon the affect experienced at a specific moment. Unlike the left-brain process in Panel 1, however, the right-brain process in Panel 2 does not have to begin at a relatively lower level and rise progressively. This is because the left-brain processes information sequentially, whereas the right-brain attends to the stimulus holistically (Moscovitch 1979, Tucker 1981).

In the low-involvement condition, recall that we were unwilling to delineate as to whether cognitive processing or affective processing will occur. Accordingly, it is not possible to specify (see Panel 3 of Figure 1) whether the right-brain or the left-brain processes will dominate. Both the processes will be at low levels, so the question of which process is primary and which secondary may be indeterminate or even immaterial.

FIGURE 1

RELATIVE ENGAGEMENT OF THE LEFT- AND RIGHT BRAINS IN ADVERTISEMENT PROCESSING

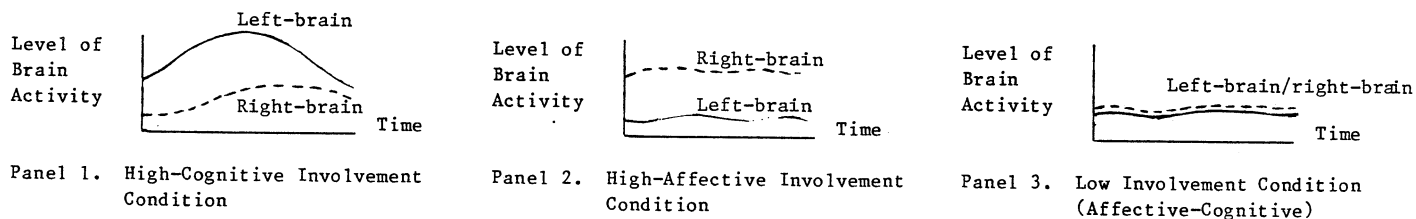


TABLE 1

A FRAMEWORK OF CORRESPONDENCE BETWEEN CATEGORIES OF INVOLVEMENT AND LEFT/RIGHT BRAIN ENGAGEMENT

Category of involvement (1)	Conditions that engender or correspond to the category of involvement (2)	Aspects of the stimuli that are processed (3)	Extent of mental activity (4)	Nature of mental activity (5)	Relative engagement of left/right brain (6)
High-Cognitive	When a product's performance dimensions are important When an 'ad' contains a great deal of information which is relevant	Disparate product feature information Relatively objective information	High	Brand belief formation and their synthesis into a strong "cold" affect	LB: Intense RB: Modest
High-Affective	Product's "image" dimensions are important Ad depicts an emotional/image situation	Symbolic quality and image dimensions of the product Emotional overtones and imagery in the ad	High	Rich imagery; sensory holistic, global encoding and strong "hot" affect	LB: Modest RB: Intense
Low-Involvement (Low-Cognitive and Low-Affective)	Neither performance nor image dimensions are much important Ad depicts neither intensely emotional situation nor gives much feature information	The most readily accessible one feature or so Just a vague impression or shallow image that is not much affect-laden	Low	Shallow, sparse belief formation and surface-level general image; <u>weak</u> affect (cold or hot)	LB: Marginal RB: Marginal

Suggested Operationalizations

Stimuli. The high-cognitive, high-affective and low-involvement processing situations can be relatively easily created by a manipulation used by Park and Young (1986). Alternatively, advertisements differing in their potential to engender involvement levels and type (cognitive versus affective) can be prepared and used as stimuli delivered via both print and TV media.

Measures of Effects. Brain-wave measures using EEG procedures must be taken at multiple sites on each hemisphere. Suppression of alpha waves and (correspondingly but not identically) increase in beta waves have in the past research been used as indicators of brain-activation (see Olson and Ray, 1983). "Percentage of time each wave occurred," a measure used in past research, seems inappropriate or in any case inadequate because our framework requires dynamic plot of brain waves against the time axis. Amplitude of the alpha and beta waves (i.e., voltage) as used by Alwitt (1983) and Rust et al (1985) will therefore be more appropriate. In view of individual designs must be employed, and comparisons of EEG amplitudes across the two hemispheres be made only after the initial, base rate (i.e., activity levels during non-task, idle time) amplitudes have been partialled out within each hemisphere. Additionally, the use of new biomedical techniques that provide computer-simulated topographical displays of brain activation patterns (for description see Nevid 1984) may enable more direct observations of differential "primary" and "secondary" processes hypothesized in Figure 1.

The validity of EEG measures remains inconclusive (Stewart 1984). But theory testing and measure validation are interdependent (Cacioppo and Petty 1985), and both require a theoretical framework such as the one this paper furnishes.

Summary and Conclusion

Three categories of involvement (high-cognitive, high-affective, and low-cognitive/low-affective) were delineated, and they were in turn related to differential engagements of the hemispheres. Our reasoning led us to postulate that both hemispheres are always engaged, but that their engagement differs in being either primary or secondary. We grant that holistic processes occur in the right brain but we believe that when these occur with high intensity they represent high-affective involvement rather than low involvement conditions. So in our framework, the left brain is primarily engaged in the high-cognitive involvement condition whereas the right brain is primarily engaged in the high-affective involvement condition. In the low involvement condition, both the brains are engaged but at a low level. Moreover, either modality (print or TV, verbal or pictorial) can engender either type of involvement. Then, it is the type of involvement, not modality, which will influence the relative engagement of the hemispheres.

Our derivations are consistent with the few empirical findings that are available. Appel, Weinstein and Weinstein (1979) failed to support their hypotheses that (a) TV commercials will generate more right-brain- than left-brain activity; and (b) that higher recall commercials will generate left-brain dominance. Weinstein, Appel, and Weinstein (1980) also found inconclusive evidence for left-brain dominance for magazine advertisements and for right-brain dominance for TV advertisements. According to our framework, one must classify the content and effects (not modality) of the advertisement in order to specify in a theoretically correct way the relative engagement of the hemispheres.

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HEMISPHERIC LATERALIZATION: THE RELATIONSHIP OF PROCESSING ORIENTATION
WITH JUDGEMENT AND RECALL MEASURES FOR PRINT ADVERTISEMENTS

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Abstract

Studies of hemispheric lateralization have identified that certain types of mental processes occur differentially in the left versus right hemispheres of the brain. The left hemisphere is more specialized for the processing of information sequentially, verbally, and logically while the right hemisphere operates spatially, intuitively, and holistically. Differences in the extent to which individuals emphasize certain forms of processing has led to the development of a taxonomy which characterizes integrated, mixed, right-dominant, and left-dominant information processors. Results of a study of individuals categorized within this taxonomy indicate that those readily engaging both hemispheres during processing (integrated processors) demonstrate greater overall recall of the verbal and visual portions of a series of print advertisements when compared to individuals preferring a more modality specific form of processing. Results for affective and cognitive reactions to the advertisements were mixed, but were consistent in direction with the memory predictions.

Introduction

Research in such diverse fields as neurology, cognitive psychology, human resources management and consumer behavior has explored the topic of hemispheric lateralization - the notion that certain types of mental processes occur differentially in the left versus right hemispheres of the brain. Neurologists and physiological psychologists were first to examine the phenomenon, by studying the effects of unilateral brain damage, or of the surgically induced intersection of the two halves of the brain. This research indicates that, while one hemisphere can sustain an individual, as normal maturation occurs, the left and right hemispheres develop specialized functions (Bogen 1969; Sperry 1975). Sperry (1975), for example, showed that if an object was placed out of sight, in a "split-brain" person's left hand, it could not be named by the subject. Alternatively, if the same object was presented to the subject's left visual field (processed in the right hemisphere), the subject could successfully pick up a similar item with the left hand. So, although the information processed in the right hemisphere could not be verbalized, the existence of some symbolic processing was evidenced.

This specialization has also been shown to occur in normal individuals, in whom constant communication occurs between the two hemispheres. Using analyses of electroencephalograms (EEGs) Doktor (1978), for example, showed that an intuitive, spatial problem solving task generated more right brain activity than did a problem requiring logical, verbal skills. In summarizing the types of processes occurring in each hemisphere, Ornstein (1973) states that the left hemisphere processes sequentially, verbally and logically, while the right hemisphere operates spatially, intuitively and holistically. Support for this differentiation has been presented more recently. For example, Springer (1979), reports left brain superiority for tasks involving verbal stimuli such as words or nonsense syllables, and for tasks involving fine temporal discriminations. Also, a substantial body of psychological research examining lateralization as it relates to mental imagery has been summarized by Ley (1983). He reports consistent and wide ranging evidence of right hemisphere superiority for a variety of visual and imaginal processing tasks.

In the study conducted by Doktor (1978), professionals of two different categories, business executives versus oper-

ations research analysts were studied. In addition to the finding reported above, Doktor also found that overall, the analysts tended to use less right hemisphere processing than did the executives, regardless of the task they performed. His conclusion regarding this phenomenon was that processing style was conditioned by education and experience, although also affected by the type of task with which individuals are faced. Processing style or cognitive style pertains to an individual's preferred strategy for seeking meaning (Furse and Greenberg 1975) and in this study relates directly to a preference for engaging in one form or another of processing that favors the encoding of visual and/or verbal consumption oriented information (Childers, Houston and Heckler 1985).

The notion of hemispheric processing style or preference has subsequently been studied by a number of human resource management professionals. Conclusions reached by management specialists such as Herrmann (1981) and Lynch (1982), in their work regarding the effects of lateralization on management style or training, suggest that the best results come from combining the processes associated with each hemisphere. They reveal, however, that the management personnel with whom they work often emphasize left brain processes to the detriment of holistic or spatial thinking. Herrmann (1981) and Taggart and Torrance (1984) have each recently developed a systematic program to identify hemispheric dominance in individuals and to subsequently point out the benefits of utilizing a flexible style of processing to optimize problem solving capabilities.

An interest in hemispheric lateralization has also emerged in the discipline of consumer behavior. Hansen (1981), following an overview of the lateralization literature, proposed a series of right-left brain processing implications for consumer-oriented attention processes, pictorial/non-verbal communication, effects of mere exposure, involvement and individual differences. He reiterates, for example, Krugman's (1977) suggestion that right-hemispheric processing dominance allows recognition to occur, but recall requires the activation of left-hemispheric verbal processing. Such a situation might be evidenced when only an "early global" level of attention (Broadbent 1977) has occurred with respect to the stimulus--leading to the subjects' ability to recognize but not recall a stimulus ad. Only after a "verification" stage of attention, utilizing left-hemispheric processing, will recallability be present.

Another area which Hansen (1981) suggests might be critically influenced by the differential capabilities of the left versus right hemispheres is the processing of and subsequent effects of pictorial/non-verbal communication elements. Evidence regarding hemispheric processing and pictorial communication is limited, but at present appears to be mixed. Appel, Weinstein and Weinstein (1979) failed to support their hypothesis that television viewing (due to the distinct visual nature of the task) would produce dominant right hemisphere activity, nor did they show that commercials creating higher levels of left brain activity were recalled better. They did show that those ads producing the highest level of activity, regardless of hemisphere, produced the highest levels of recall, perhaps reflecting an integration of the information. Robbins and McAdam (1974) directed subjects to image pictorial material in terms of shapes and colors while instructing other subjects to subvocally describe a scene. In support of lateralization effects, they observed a suppression of alpha waves under the picture condition for the right hemisphere and a similar effect in the left hemisphere for

the verbal condition. In a closely related stream of research, Childers, Heckler and Houston (1986) have shown that individuals demonstrating a preference for picture processing exhibit enhanced recall for pictorial elements of print advertisements. Additionally, their study showed a significant relationship existed between their Style of Processing Scale (SOP) and a Hemispheric Lateralization Scale developed by Hirschman (1983), with visual processing preferences associated with right hemispheric dominance, and verbal processing preferences associated with left hemisphere dominance.

The purpose of the present study is to further investigate the relationship between hemispheric processing style and the information processing of print advertisements. This study utilizes an individual differences scale first reported by Torrance, et al. (1978) to identify individuals who exhibit dominant processing styles related to one, both or neither of the hemispheres of the brain. Rather than assuming that each individual must be right or left hemisphere dominant, these authors assert that there are four possible classifications of individuals--right or left dominant, mixed (random use of left or right), and integrated (complimentary use of left and right). By examining subject's processing styles within this four group taxonomy and extending theoretical implications presented by Taggart and Torrance (1984) for managerial situations, as well as those offered by Hansen (1981) and Childers, Heckler and Houston (1986) for consumer communication effects, a more comprehensive understanding of the role that individual differences play in the processing of consumption information can be attained. The discussion which follows presents a study which examines the effects of hemispheric processing style on judgement and memory measures of print advertisements.

Hypotheses

Reactions to the Ad

As pointed out by Childers, Heckler and Houston (1986), the development of an attitude toward an advertisement is likely to be based upon the entire advertisement, not just the pictorial or just the verbal elements. Information such as the copy/verbally based attributes, their composition, an ad's layout, and graphics should all be relevant to forming an impression of an advertisement. (For a framework explicating A_{ad} formation see Lutz, MacKenzie and Belch 1983). Processing styles related to both verbal and visual communication formats should therefore be pertinent to the formation of ad impressions. Taggart and Torrance's (1984) efforts indicate that processors who are able to utilize both modalities may more effectively encode and utilize both communication formats to accomplish a task. They also speculate that integrated processors will be more effective than mixed processors in performance of tasks, but no evidence is offered to support this idea. Therefore it is hypothesized that:

- H1: Information processors using an integrated or mixed strategy of processing will differ from right or left dominant processors in their attitude toward the advertisement and their evaluation of the advertising message.

Recall

Previous research has shown that individuals with a preference for visual processing, demonstrated higher levels of picture recall than those indicating a verbal processing preference (Childers, Houston and Heckler 1985; Childers, Heckler and Houston 1986). Appel, Weinstein and Weinstein (1979) however, showed that the highest level of television ad recall resulted from maximum processing activity in either of the brain's hemispheres. Also, Torrance and Taggart (1984) conclude that the utilization of processes associated with both hemispheres produces optimal effectiveness in managerial problem solving. Finally, Hansen (1981) proposes that right hemisphere activity may be related to early stages of attention,

whereas left hemisphere activity is required for recall-ability to be demonstrated, thus implicating both hemispheres in the effective processing of incoming information. This leads to the hypothesis that:

- H2: Individuals demonstrating an integrated or mixed form of processing will recall more of the visual and verbal information portions of advertisements than will left or right dominant processors.

Additionally, as an attempt to further support the findings of Childers, Heckler and Houston (1986), regarding the relationship of the SOP and modality encoding effects, the following hypothesis is offered regarding right and left dominant processors:

- H3: Individuals demonstrating right hemisphere dominance will recall more information from the pictorial portion of the advertisements than will individuals demonstrating left hemisphere dominance.

Methodology

Subjects

Subjects were recruited to participate in the study from second and third year undergraduate courses at a midwestern university. A total of 111 students participated in the study. The study was represented as an investigation of advertisements in their early stages of development. Participants were informed that they would view a series of ads and would be asked to rate each ad along a number of different criteria in order to provide advertisers with guidance on how to improve their ads prior to final development. At no time were subjects informed that they would be asked to give any other information, such as individual difference scales or memory tests. Participants were tested outside of the classroom in groups of from four to eight individuals.

Procedure

Following the cover story, each subject was exposed to six advertisements projected onto a screen using 35mm slides. The subjects were instructed to evaluate each ad on a series of 9-point bipolar rating scales that were explained to them prior to exposure of the first ad. The initial phase of the study thus consisted of exposure to each of six ads (15 seconds), each followed immediately by exposure to the scales used to perform the ratings (30 seconds). Following a two minute distractor task participants were given ten minutes to complete free recall protocols in which they were asked to write in any order everything they could remember about each ad. The recall form was structured so that subjects listed elements from the picture versus the copy for each ad. Upon completion of the free recall protocols, subjects were given an aided message test in which they were provided the product classes represented in each ad and asked to write down the main idea(s) or message(s) contained in each ad. Following the recall test, subjects completed a set of individual difference scales including the Taggart and Torrance (1984) and Hirschman (1983) scales of Hemispheric Lateralization. Subjects were then debriefed and dismissed.

Stimulus Materials

The ads were professionally drawn by a graphic artist, but the layout reflected a "storyboard" appearance. Each ad contained a picture with two major elements and a copy that contained from 24 to 36 words. The pictorial portion of the ads was designed to convey one message about the product while the copy conveyed a second message. For instance, if the picture indicated that the tires contained in the ad were durable the copy emphasized their good value. This way memory could be examined for the message conveyed in the picture versus the copy of the ads.

Pretests previously conducted on the stimulus materials indicated that the ads were successful in conveying information about these two product attributes (see Childers 1982; and Houston, Childers, and Heckler 1985).

Measures

Individual Differences. Two measures of individual differences in hemispheric lateralization were collected: 1) the Taggart and Torrance Human Information Processing Survey (1984) that taps dominance for engaging in one, both or neither forms of hemispheric processing, and, 2) a 7 item scale developed by Hirschman (1983) again, to assess Hemispheric Lateralization. (Additional individual difference measures were collected which were not pertinent to the present investigation.) The Taggart and Torrance scale consists of forty items, in the form of three statements from which subjects choose the statement with which they most strongly agree. Extensive efforts to support the validity and reliability of the instrument have been conducted. For example, seven test/retest reliability studies conducted on the scale produced Pearson correlation coefficients ranging from 0.63 to 0.84 for the right hemisphere scales, 0.55 to 0.86 for the left and 0.65 to 0.84 for the integrated style scales (Taggart and Torrance 1984). Additional reliability data collected by Denny and Wolf (1980) resulted in a Cronbach KR-21 reliability coefficient of 0.84. Construct validity studies have examined the relationship between the results of the hemispheric lateralization instrument and subjects' problem solving skills (Agor 1983; Bracken, Ledford and McCallum 1979), processing speed and memory encoding (Coleman and Zenhausern 1979), and ratings on other measures (for example, measures of creativity (Torrance 1982), artistic ability versus mathematic ability (Ghosh 1980)). These studies and many others described in detail by Torrance and Reynolds (1980) generally support the internal consistency, predictive validity and construct validity of the scale.

Dependent Variables. Measures of free recall were based upon the responses to the protocols. An extensive coding format was developed which categorized and described the pictorial and verbal elements of the advertisements. The pictorial descriptors included the main visual objects, plus the message (which had been shown to be communicated by the picture in the pretests described above). Copy descriptors consisted of the brand name and product class along with the message contained in the copy. Thus, each portion of the ad was represented as containing three basic elements. Two trained students independently coded the protocols according to the described categories and demonstrated an inter-coder reliability of .91. Any discrepancies were resolved between the coders before analyses were conducted. The aided recall test consisted of presenting subjects with product class cues requiring them to indicate brand names and message(s) for the appropriate products. The attitude toward the ad measure was taken from Fishbein and Ajzen (1975) and consisted of four 9-point bipolar scales (good-bad, superior-inferior, unpleasant-pleasant, like-dislike) with a coefficient alpha of 0.90. Three scales were adapted from Cacioppo, Petty, and Morris (1983) to measure message evaluation - not at all effective-extremely effective, very well designed-very poorly designed, and very convincing-not at all convincing (alpha = .89), as another measure of judgement related to the advertisements.

Results

In order to examine the hypotheses forming the basis of the study, scores from the Taggart and Torrance scale of Human Information Processing were utilized to place subjects into one of four groups - Right Hemisphere Dominant, Left Hemisphere Dominant, Integrated Style or Mixed Style of Processing. This categorization produced group sizes of 15 Right Dominant, 11 Left Dominant, 11 Integrated, and 71 demonstrating a Mixed Style of Processing. This unequal distribution of scores is not unexpected, as a subject must demonstrate a score above the eighty-fifth

percentile on the appropriate scale to be considered right dominant, left dominant or integrated. Following the formation of the groups oneway analyses of variance were conducted to test the hypotheses. The results of these analyses are described in the next sections.

Measures of Hemispheric Lateralization

Table 1 displays a comparison of results obtained using Hirschman's Scale of Hemispheric Lateralization and the Human Information Processing (HIP) Survey. Mean scores on the Hirschman scale are reported for each of the HIP processing style categories. A clear and significant relationship is seen between the two measures, as the Right Dominant processors score highest on the Hirschman scale and Left Dominant score lowest. Using an Analysis of Variance to evaluate the results, both the overall F-value and the linear trend coefficient are significant at a $p < .01$ level, where the predicted trend of the scores was Right > Integrated > Mixed > Left.

TABLE 1
THE RELATIONSHIP BETWEEN TWO MEASURES OF HEMISPHERIC LATERALIZATION

	Left Dominant Processors	Right Dominant Processors	Mixed Processors	Integrated Processors	F-Value	Prob
HIRSCHMAN* SCALE SCORE	18.2	29.1	24.5	26.4	8.6	<.01

*A post hoc trend of polynomial effects showed a significant linear component at $p < .01$ where the predicted trend was RIGHT > INTEGRATED > MIXED > LEFT.

Reactions to the Ad

Two evaluation measures, described above, were used to test the hypothesis regarding reactions to the advertisements. Mean scores for each of the hemispheric processing style groups are displayed in Table 2. For both the attitude toward the ad measure and the message evaluation measure, integrated processors produced the highest mean scale values, however the overall F-values in the oneway ANOVAs were not significant. A post hoc LSD test of differences in means ($p < .10$) did show that integrated processors produced significantly higher scores on the message evaluation scale than did right dominant or mixed processors, providing weak support for H1. Interestingly, left dominant processors produced the second highest score. This result would be consistent with the notion offered by Hansen (1981) that the evaluation of the advertisement required more left hemisphere processing. Overall, however, the results do not strongly support the notion that processing style will affect judgements regarding print advertisements. Future research might examine these evaluation measures when some time delay is introduced between stimulus exposure and ratings, to identify whether processing style is a more dominant force when evaluations are not based upon information held in short term memory.

Recall

Table 2 contains the mean number of items recalled from: 1) both the picture and verbal portions of the ads, 2) the picture portion of the ad, and 3) the verbal portion of the ad for each of the processing style groups. As predicted in hypothesis 2, the highest level of recall is exhibited by integrated processors. Significant overall F-values ($p < .05$) are reported for both total memory and picture memory, and significant linear trend coefficients are found for all three measures of recall, providing strong support for H2. Additionally, for the memory task, the results support the notion of Taggart and Torrance (1984) that integrated processing is more effective than mixed processing.

The final hypothesis attempted to support the results reported by Childers, Heckler and Houston (1986), who found that visually oriented processors, as measured by the SOP, demonstrated higher levels of picture recall than did left dominant processors. Again, as seen in Table 2, right dominant processors' picture recall (mean = 10.6) was higher than that for verbally oriented processors

(mean = 8.9). However, the difference was not significant at the $p < .10$ level, and so H3 is not supported. Because the trend in means conformed to previous findings, and since so little research has been done to understand the relationship between hemispheric processing style and memory for visual versus verbal elements, future research should continue to examine this area, perhaps by focusing upon specific elements in the picture or copy portions of the advertisements such as brand name or picture versus copy theme.

TABLE 2
THE RELATIONSHIP BETWEEN HEMISPHERIC PROCESSING DOMINANCE AND ATTITUDE AND RECALL MEASURES FOR PRINT ADVERTISEMENTS

	Left Dominant Processors	Right Dominant Processors	Mixed Processors	Integrated Processors	F-Value	Prob
Attitude AD	124.8	121.2	125.0	131.6	0.6	>.10
Message Evaluation**	117.4	112.4	113.8	125.6	1.2	>.10
Total Recall*	14.5	16.5	18.3	20.7	3.0	<.05
Picture Recall*	8.9	10.6	11.8	12.3	3.2	<.05
Copy Recall***	5.6	5.9	6.3	8.5	1.9	>.10

* A post hoc trend of polynomial effects showed a significant linear component at $p < .01$ where the predicted trend was INTEGRATED > MIXED > RIGHT > LEFT.

** A post hoc LSD comparison test ($p < .10$) showed INTEGRATED processing scores to be significantly higher than one or more of the other groups.

*** A post hoc trend of polynomial effects showed a significant linear component at $p < .01$ where the predicted trend was INTEGRATED > MIXED > LEFT > RIGHT.

Conclusions and Discussion

Conclusions

Mixed results have been obtained regarding the hypotheses tested in this study of hemispheric lateralization and processing of print ads. Only weak support has been found for the notion that integrated and mixed processors, because they utilize both modalities of processing, will form different judgements toward an advertisement than will left or right dominant processors. Also, a previous finding that visually oriented processors recall significantly more of the picture portion of an ad than do verbally oriented processors, was not replicated. The hypothesis that integrated processors would recall more of an advertisement than right or left dominant processors was supported for three different measures of recall. This finding seems to support ideas presented by management development consultants, that optimization of problem solving skills (including for example, memory tasks) requires the integrated use of processing strategies based in both hemispheres of the brain. The next section will describe some of the implications of individual differences in processing style for the development of marketing communications and consumer education.

Discussion

The recognition that individual differences in processing style may impact on information acquisition, memory and judgement has several important implications. A preference for processing information that is consistent with the specialized nature of the two hemispheres has implications for the presentation of consumption information. Identification of a coding preference may necessitate an adaptation of the message to the intended audience. The present research indicates that individuals do vary in style of processing preference and thus indicates another basis upon which a market might be segmented. Such segmentation would carry with it implications for both message design and placement. Integrated and left dominant processors, for example, appear to evaluate the effectiveness of the message differently than others.

Furse and Greenberg (1975) compared a more generalized form of cognitive style to product attitudes and found that style differentiation produced segments that differed

with respect to their mass media habits. One segment indicated a preference for print media and demonstrated greater readership of magazines while a second segment was more visually oriented and exhibited greater television viewing behavior. The use of pictures and modelling to create interactive, highly memorable images should be especially important in TV advertising since it is generally considered to be a low involvement medium (Lutz and Lutz 1978). On the other hand, print media because of its more involving nature, might utilize a strategy whereby the visual and verbal copy might convey different or incongruent product messages (Houston, Childers and Heckler 1985). The latter might be more effective when targeted at segments that utilize more integrative or mixed forms of information processing. Thus, even if processing style is not used as a basis for segmenting a market, knowledge of this orientation is important in guiding message composition and media selection.

Additionally, knowledge of processing style may have important public policy implications as well. Assessing the propensity of consumers to utilize various forms of consumption information could lead to programs designed to increase the acquisition skills for those types of information seen as underutilized. Lundsgaard (as quoted in Hansen 1981) reported that the extent to which a person is left or right brain dominated depends partly on the training they have received. Working with patients with left hemispheric lesions and verbal memory deficiencies, Patten (1972) was able to improve their mnemonic skills by instructing patients to create vivid and bizarre images. Herrmann (1981), Lynch (1982) and Taggart and Torrance (1984) all assert that by instructing managers to utilize processing strategies associated with both hemispheres, they can optimize both problem solving and interpersonal management skills. Their studies also indicate that an integrative processing style can be acquired or enhanced through educational programs. Similar programs might be designed to assist consumers in developing integrative processing skills, for use in their acquisition and evaluation of consumer information.

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Abstract

Research suggests that males' cortical hemispheres are more specialized than are those of females. Theorizing derived from this observation led to several hypotheses. Qualitative differences in the outcomes of males' but not females' performance on a sorting task were anticipated when stimuli were presented in picture form, which encouraged the use of right hemisphere processing, versus word form, which encouraged the use of the left hemisphere. Data are offered that support this prediction.

Introduction

A burgeoning literature suggests that gender differences exist in a broad assortment of judgments and behaviors (Eagly and Carli 1981; Lenney 1977; Meyers-Levy 1985). Recent research also seems to suggest that such gender differences may be related to differences in males' and females' cortical structure and functioning (McGlone 1980). Although at present these gender differences in cortical operation admittedly are equivocal and not clearly understood (see commentary to McGlone 1980), the current research attempts to explore the validity of some implications derived from current theorizing pertaining to gender differences in cortical operation. At issue is how the postulated gender differences in cortical operation might result in differences in males' and females' perceptions of objects or products.

Hemispheric Operations and Gender Differences

Before considering the issue of gender differences in cortical functioning, a fundamental understanding of hemispheric specialization is necessary. Substantial research indicates that for most normal individuals qualitative differences exist in the type of processing performed by the right and left cortical hemispheres. The right hemisphere is typically associated with holistic or gestalt apprehension of information (Nebes 1978). This hemisphere seems to be more adept at perceiving whole configurations and relating stimulus elements into perceptual units rather than attending to the particulars and peculiarities embodied within the stimulus information (Bradshaw and Nettleton 1981). Accordingly, one might think of the right hemisphere as involved in a form of heuristic processing that often results in somewhat global and simplified perceptions. By contrast, the left hemisphere operates in a more analytic manner (Levy 1969). It is more adept at producing "a differentiation of the stimulus array into specific elements," (Tucker and Williamson 1984, p. 205). Thus, the left hemisphere appears to dis-aggregate stimuli and exhibit sensitivity to fine distinctions that occur among constituent elements of stimuli.

The right and left cortical hemispheres also seem to be implicated in the performance of certain types of tasks. The right hemisphere is implicated in the processing of nonlinguistic pictorial stimuli and most visual spatial processing (Bradshaw and Nettleton 1981). Tasks or stimuli of these sorts would seem to benefit from the right hemisphere's capacity to appreciate holistic and synthetic aspects of stimuli. The left hemisphere is typically involved in comprehending the nuances of verbal or linguistic information. Thus, for example, the left hemisphere is involved in reading and speech production of words or sentences, which would seem to require substantial attention to and manipulation of subtle detail (e.g. attending to syntax, phonetics, etc.) and thereby be consistent with the left hemisphere's penchant for segmentation and apprehension of detail.

Investigations of gender differences in cortical functioning imply that these distinctions between how the right and left cerebral hemispheres operate are more pronounced among males than among females. Males' cortical hemispheres appear to be organized more asymmetrically relative to the hemispheres of females (McGlone 1980). Thus, males' hemispheres seem to be more specialized in their functional capacity, and in turn, males' performance of tasks tends to be rather exclusively tied to the activation of a single and particular ("appropriate") hemisphere. By contrast, females' hemispheres are organized more symmetrically. Females seem to use the right and left hemispheres more interchangeably. For example, in performing a visual spatial task, which is typically regarded as a right hemisphere task, research indicates that males are found to consistently activate right hemisphere resources while females often engage in substantial left hemisphere activation during such task performance (Restak, 1979).

The discussion that follows draws upon this view of the genders' hemispheric organization and functioning. Implications are considered concerning how gender differences in the degree of hemispheric specialization of function might affect males' and females' perceptions of objects. The hypotheses that eventuate are then examined in an experimental study.

Hypotheses

The view that males' cortical hemispheres are more specialized than are those of females implies that males are more likely to selectively activate either the right or left hemisphere in processing information. Research suggests that the choice of which hemisphere is employed is likely to be a function of factors such as the pictorial or verbal nature of the stimuli (Hansen 1981) and the type of task to be performed (Bradshaw and Nettleton 1981). This suggests that if task-relevant stimuli were presented in either word or pictorial form, this manipulation would have a more pronounced or powerful impact in shaping males' as opposed to females' processing of the task information.

Consider a situation in which subjects are asked to sort each of several objects into groups that contain what subjects perceive as similar objects. Further, imagine that the objects to be sorted vary in how well they exemplify a particular product category (e.g. furniture). Thus, some objects are relatively good exemplars of the category (e.g. chair, stereo) while others are quite poor exemplars (e.g. fan, telephone). It would seem that performance of this sorting task could be accomplished by drawing upon either the right hemisphere, the left hemisphere, or both hemispheres. However, suppose that the form in which the category exemplars are presented is varied. For some subjects exemplars are presented in word form, while for other subjects exemplars are presented in picture form. There is reason to expect that this manipulation of the form in which stimulus materials are presented will differentially affect the genders' perceptions of the category exemplars.

Because it has been found that males' hemispheres are relatively asymmetrically organized, thereby leading males to draw selectively and rather exclusively upon either right or left hemispheric resources, it is hypothesized that when task stimuli are presented in picture form, which typically invokes right hemisphere processing, males are more likely to activate exclusively right hemisphere resources. However, when stimuli are presented in word form, which typically stimulates left hemisphere process-

ing, males are expected to activate exclusively left hemisphere resources. In turn, the outcomes observed on males' performance of the sorting task would be expected to distinctly reflect males' use of either the right or left hemisphere during task performance. Thus, the nature of males' performance in the sorting task can serve as a means of detecting which hemisphere they employ.

Males' use of the right or the left hemisphere in sorting stimulus items should produce qualitatively different outcomes. To the extent that right hemisphere resources are predominately employed in performing the sorting task, one would expect that the poor and relatively atypical category exemplars would be sorted in a holistic undifferentiated manner: though poor items would likely be perceived as less representative of the product category than would other stimulus items that better fit the category, poor exemplars would not be distinguished from one another. Thus, few groups should be formed among these poor exemplars. By contrast, if the task was performed by drawing on left hemisphere resources, one would expect greater distinctions or discriminations to be drawn among the poor exemplars. As a result, a relatively large number of groups should be formed among the poor exemplars. Moreover, poor exemplars often might be relegated to single-item groups that maximally distinguish these poor items from all other category exemplars.

Predictions for females, however, would be different. Because females' hemispheric organization is relatively symmetrical, it follows that females tend to use their cortical hemispheres more interchangeably and perhaps more simultaneously. Thus, the picture/word form manipulation of stimulus presentation should be less powerful in determining which of the two cortical hemispheres females employ during task performance. Instead, regardless of the form of stimulus presentation, females are likely to activate both rather than only a single hemisphere in performing the sorting task. This suggests that the sorting task outcomes displayed by females will reflect the use of both hemispheres. Accordingly, it would be anticipated that sorting task outcomes observed among females would be less extreme relative to those observed among males: Poor category exemplars should be sorted into a moderate number of groups, regardless of the picture/word form of stimulus presentation.

To summarize, an interaction between gender and the form of stimulus presentation is anticipated for the number of groups formed among the poor category exemplars and possibly the number of poor exemplars assigned to single-item groups containing solitary poor exemplars. More specifically, it is predicted that males' sorting behavior with respect to poor category exemplars will quite clearly reflect the use of the hemisphere associated with the processing of picture/word stimuli. Thus, males will form few groups from the poor category exemplars and form few single-item groups from these items when right hemisphere stimulus processing is encouraged by pictorial presentation of the stimulus materials. Poor category exemplars will be sorted into more groups and more single-item groups will be formed among these poor exemplars when left hemisphere processing is encouraged by word presentation of the stimulus materials. However, females' sorting behavior should be less affected by the pictorial/word form of stimulus presentation. Regardless of whether stimuli are presented in picture or word form, females are expected to employ both hemispheres in performing the sorting task. Thus, females are anticipated to assign poor category exemplars to an overall moderate number of groups and a moderate number of groups that contain only a single poor exemplar.

Methodology

Subjects

Thirty nine males and 39 females from a middle class Midwestern community were recruited by a market research firm to participate as subjects. Each individual received

\$5 in return for his/her participation.

Procedure

Subjects were informed that the purpose of the study was to examine the types of objects that consumers perceive to be related. Subjects were asked to engage in a sorting task¹. A detailed example of how this task was to be performed was provided to subjects. This example employed exemplars from an object category unrelated to the stimulus materials. Following this, subjects were presented with an array of 12 exemplars of a product category displayed on a single piece of paper. These exemplars were presented in either picture or word form. They consisted of four poor, four moderate, and four good exemplars of the object category (according to norms established by Rosch 1975) and were presented in random order. Subjects were instructed to sort these exemplars into groups that were to be comprised of items that subjects' perceived to be similar. Subjects were informed that they could form as many or as few groups as they desired, and groups could include as many or as few items as they deemed appropriate. After completing this task for exemplars associated with one object or product category (furniture), subjects performed the same task for a second category (vehicles).

Results

The data were analyzed as a 2 (gender) by 2 (presentation form: words, pictures) by 2 (hemisphere prime: right, left) factorial design. (See footnote 1 concerning this latter factor.) First, the number of groups formed among the poor category exemplars was analyzed for both object/product categories (furniture and vehicle). Multivariate analysis of these measures revealed the anticipated gender by presentation form interaction ($F(2,67)=3.97, p<.02$). Treatment means are presented in Table 1. Simple effect tests revealed that as expected males' but not females' performance was affected by the form in which category exemplars were presented. Males' assigned the poor exemplars to fewer groups when exemplars were presented in picture rather than word form ($F(1,68)=7.54, p<.01$). However, females sorted the poor exemplars into a moderate and equivalent number of groups, regardless of whether exemplars were presented in picture or word form ($F<1$). As a result, males sorted the poor exemplars into somewhat fewer groups than did females when exemplars were presented in picture form ($F(1,68)=3.23, p<.08$) but they sorted the poor exemplars into more groups than did females when the exemplars were presented in word form ($F(1,68)=5.04, p<.03$).

Analysis of the number of poor category exemplars that were assigned to groups consisting of only a single poor exemplar and no other items revealed main effects for gender ($F(2,67)=4.74, p<.01$) and presentation form ($F(2,67)=4.62, p<.01$). Males formed more single-item groups among the poor exemplars than did females ($M=.91$ versus $M=.21$, respectively), and more such single-item groups were formed when exemplars were presented in word than in picture form ($M=1.43$ versus $M=.72$). No interaction was observed among these variables.

TABLE 1
MANOVA CENTROIDS FOR SORTING MEASURES

	Number of Groups Formed Among Poor Exemplars	
	Males	Females
Picture	4.53	5.06
Word	5.40	4.69

¹Before performing this task, however, subjects were asked to perform a priming task. This task entailed having subjects perform either a visual spatial task or a verbal task. Because the sorting task performance data presented herein reveal no effects due to this manipulation, this priming task manipulation is not discussed further except for its inclusion as a factor in the data analyses. Also not discussed is a judgment task that subjects performed prior to the sorting task.

Discussion and Conclusion

The data from this study are consistent with hypotheses derived from the view that males' cortical hemispheres are asymmetrically organized while those of females are relatively symmetrical in their organization. Because males' cortical hemispheres are relatively asymmetrically organized, males tend to selectively draw on either right or left hemisphere resources: Thus, it was hypothesized that the cortical hemisphere that males employed in processing the stimulus materials would vary depending upon whether stimulus materials were presented in pictorial form, which should encourage the use of the right hemisphere, or word form, which should encourage the use of the left hemisphere. The hemisphere used by males was detected by examining the nature of their performance on a sorting task. Consistent with predictions, when stimulus material was presented in picture form, males seemed to invoke right hemisphere resources in perceiving the stimuli. This was evidenced by their formation of few groups among the poor category exemplars. By contrast, males who were exposed to stimulus materials that were presented in word form seemed to draw upon left hemisphere resources in performing the sorting task. This was evidenced by their propensity to produce relatively differentiated groups among the poor exemplars. Thus, they formed a relatively large number of groups among the poor exemplars. Although a greater number of poor exemplars were assigned to single-item groups when stimulus materials were presented in word rather than picture form and males formed more such single-item groups than did females, the expectation that males would form more such groups when stimulus presentation was in word rather than picture form was not confirmed.

The data are also consistent with the hypothesis that females, whose cortices are relatively symmetrically organized, are less tied to the use of a particular hemisphere in processing information and in turn often use both hemispheres concurrently, regardless of the manner in which the stimulus materials are presented. In the present study this was exemplified by females' performance on the sorting task, which represented a balance between the unitization emphasis of the right hemisphere and the differentiation focus of the left hemisphere. Females formed a moderate number of groups among the poor category exemplars.

These findings have implications of potential interest to marketers. They lead to the inference that when targeting males, it may be possible to portray a product as more or less similar to a related though not necessarily most common product category associated with the focal product by varying whether the advertisement used to make this claim is predominately pictorial or verbal in its presentation form. If a marketer wishes to position his/her product as a member of a product category not normally associated with the focal product (e.g. positioning 7-Up as a soft drink), this might be better accomplished by labeling the product as a member of the product category and pictorially portraying the product with other members of this product category as opposed to discussing this relationship in a verbal message. Alternatively, if a marketer desires to position a product as different from other members in a product category, this would seem to be more effectively accomplished by verbally discussing how the product is distinguished from other members of the product category rather than relying on visual demonstration in discriminating the product from other category members. Research that explores these hypotheses in a more applied setting is needed.

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Abstract

This paper discusses three papers concerning hemispheric lateralization. Each of the papers has weak findings but are consistent with the psychology source literature. Possible explanations for the weaknesses are explored and data are presented to show the complex nature of hemispheric lateralization as seen in the author's EEG research.

Introduction

A recent trend in consumer research has been toward a greater focus on emotional and nonverbal stimuli and on their processing. One area of study brought to bear on this topic has been that of hemispheric laterality, a topic with rich potential but one of complex issues, theories and methods.

The three papers in this session introduce three different paradigms concerning hemispheric laterality as a way of evaluating stimuli and the cognitive and affective processes that result from exposure to stimuli. There are some commonalities across the three studies that are interesting. Each presents basically accurate introductions of the literature upon which it is based, each reports results that are consistent with that literature, each has insights and ideas useful to consumer researchers and each obtains results that are weaker than its researchers would have liked to see.

This paper discusses possible reasons for this last commonality and presents a summary of the author's work that might be helpful in explaining some problems. The three papers have flaws that need to be examined for two reasons:

1. The subject of hemispheric lateralization is extremely complex; and
2. The results obtained in this area are often weak and subtle.

Flaws in design quickly tend to wipe out effects in such cases.

Complexity of Processing

It is too simple to think of a clean separation of processing between hemispheres in normal subjects. Music and pictures are not processed exclusively in the right hemisphere, and words are not processed exclusively in the left. The EEG literature shows tendencies to process in certain locations but there is rarely more than a 15% processing advantage for either hemisphere; as stimuli become more complex, this differential decreases. Gevins, et al. (1979) do not believe there is any evidence for lateralization of different cognitive functions, but this extreme view seems to be in the minority.

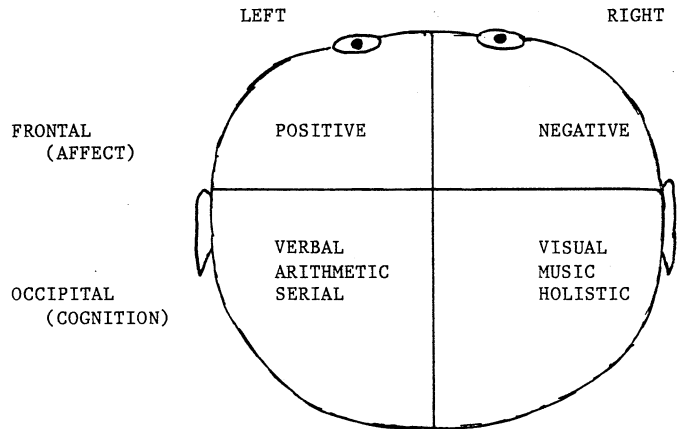
In addition, as shown in Figure 1, there are also anterior-posterior differences such that the frontal lobes have a differential advantage in showing affective processing (frontal left dominance reflects positive affect; frontal right dominance reflects negative affect), while the posterior lobes (occipital, parietal, temporal) are more likely to show cognitive processing. It is important to keep in mind that the anterior-posterior functions may be as important as the hemispheric differences. A good summary of frontal activation can be found in Davidson (1984).

Given the complexity of this topic and the subtlety of results, it is important that research be done precisely.

Seemingly minor issues can mask potential findings. The next part of this paper discusses the three papers and examples of such problems.

FIGURE 1

HEMISPHERIC AND ANTERIOR/POSTERIOR PROCESSING DIFFERENCES



Comments Regarding the Three Presented Papers

Anand, Holbrook and Stephens (1987)

As with the other papers, this one is interesting but the results are weak. Potential flaws include:

1. There is a lack of pretesting of the stimuli. The research examines differences between text and music stimuli in terms of recognition and affect; in order to do this it would seem necessary to know some things about the stimuli. Was there prior knowledge of the stimuli? While it would be easy to select a previously unseen piece of text, was the music also unknown to the subjects? Was the music soothing and likeable or grating and disliked? Again, it would seem easy to find a neutral piece of text. If there were a test of memory, would both stimuli be equally learnable?
2. The design is not fully balanced. The impact of the first flaw is seen here. To test laterality effects on affect, it would seem proper to examine both positive and negative stimuli. Both stimuli are needed because both reception and affect are lateralized. If reception through the right ear leads to positive affect, is this because the stimulus is initially processed in the left hemisphere (and is therefore closer to the left frontal lobe which is activated to show positive affect), or because the stimulus is positive and would activate the left frontal lobe regardless of how it is received?
3. Gender of respondents was not considered. As discussed by Myers-Levy (1987), hemispheric laterality is gender specific and therefore must be considered in this type of research. It is possible that results would be clearer if separated by gender.

4. The design does not allow for the assessment of stimulus interaction. If stimuli are exclusively processed in one hemisphere, then there might be little interaction between stimuli, but if there is parallel processing there could be considerable interaction. The design doesn't allow for assessing interaction, but the (positive) music could interact with the (neutral) text such that the text could be felt to be positive. If the text were received in the left hemisphere without the music in the right hemisphere, it might not be received positively. To eliminate this explanation, the design must include cells that separate music and text stimuli.

Heckler and Childers (1987)

Again, the idea for the paper is interesting, but the results are not as strong as the authors would have liked. There are at least two contributors to the weak findings.

1. Lack of consideration of visual field of verbal and visual stimuli. In most consumer research this is not a relevant consideration, but if the topic of the work is hemispheric lateralization, then visual field is important. Janiszewski (1987) has shown that a stimulus seen in the right visual field is initially received in the left hemisphere. Processing then differs depending on whether the stimulus is verbal or visual.

Heckler and Childers test recall of verbal and visual components of print ads but don't consider the visual field of the stimuli. By neglecting this issue, potential results may be diminished because the visual and verbal components appear randomly in their ads, with no visual field control.

To be precise, research on laterality effects needs to consider and control location of the verbal and visual stimuli, relative size of each, size of the total ad and subject's distance from the ad. Janiszewski attempts to control focal point of vision by asking subjects to read editorial content which has ads to its left and right. This level of control is necessary for studies of laterality.

2. Gender of respondents was not considered. See point 3. above.

As Heckler and Childers report, there is little dominance for complex stimuli, and most individuals are mixed processors. If this is the case, then Anand, Holbrook and Stephens need to strongly consider the possibility of interactions in their dichotomous listening task.

Myers-Levy (1987)

This paper is consistent with the others in that it is properly grounded in the psychology literature from which it is derived. This literature shows that there are clear gender differences in laterality effects and that a priming task can have a strong impact on the outcome of following tasks. This paper, though, also has some flaws that possibly limit the findings.

1. How long does a prime last? In this experiment the length of the priming task, and the interval between the priming task and the experiments task were very loosely controlled. Subjects had five minutes for the priming task, but may have finished sooner or may have not paid attention to the task at some point. The strength of the prime is therefore not clear.

In the EEG literature, evoked response potential methods show a lag of 300 msec between stimulus and response. In our work the average lag is one to 1.5 seconds, and the average attention span is about 5 seconds. Given these short time periods, more control of the prime is necessary.

2. Why doesn't the prime work for the sorting task? There are at least two competing explanations for why there was no effect in this part of the experiment. Perhaps the prime decayed before the sorting task was initiated or perhaps the sorting task was too strong to be effected by the prime. We cannot sort out these explanations because the design is unbalanced; it is necessary to add cells wherein the sorting task precedes the similarity task.

3. Lack of consideration of visual field of verbal and visual stimuli. See point 1. under Heckler and Childers.

As consumer researchers branch out into new fields it is important to appreciate the complexities of these fields. While the three papers in this session introduce interesting ideas to our field, they also show weak findings that are at least in part due to a lack of consideration of the underlying complexities of the source field.

In the remainder of this paper I will try to show some of the complex relationships that we have found concerning laterality and EEG data. The area of EEG is also unforgiving of seemingly minor flaws in method. For example, our work examines EEG responses in half second chunks and shows clear stimulus - response relations; Olson and Ray (1983) used a similar method but aggregated data in two second and five second chunks. EEG changes are so rapid that they smooth out when aggregated over two seconds; therefore only weak results were found by Olson and Ray.

Recent EEG Work By Rothschild, Reeves, Thorson And Hyun

Summary of Method

Two similar studies were conducted; in each case subjects saw half an hour of television programming with nine commercials embedded. The commercials were prejudged to be emotional, rational or mixed; three videotapes were made to balance the order of commercials across the tapes. All subjects were adult right handed women. Data were collected and aggregated every half second from four locations on the scalp (right and left; frontal and occipital) in the alpha frequency range. Data analysis was based on a sixty period EEG time series (60 half seconds) per commercial. Within each commercial ten stimuli were identified (e.g., verbal audio, nonverbal audio, supers, scene change, appearance of package, body movement, head movement, zooms). A complete methods statement can be found in any of our other papers (Reeves, et al., 1985; 1986; Rothschild, et al., 1986a; 1986b).

Summary of Findings

This partial summary is designed to show the complexity of the laterality issue when dealing with a multifaceted stimulus such as a television commercial and does not summarize all of our work to date.

Over the nine commercials and ten stimulus variables there were 90 opportunities for correlations with EEG. Forty of these were significant with right hemisphere EEG, 33 with the left hemisphere. While there is a dominance in the right hemisphere there is parallel processing in the left hemisphere. Television, because it is primarily visual, is felt to be a right hemisphere stimulus. While there is right dominance in general, this is not the case for verbal stimuli or rational commercials (Rothschild, et al., 1986a).

Regression models for each commercial and hemisphere also show parallel processing; in addition, autocorrelation is greater in the left hemisphere, perhaps because the right hemisphere is felt to monitor all incoming stimuli and therefore changes more rapidly (Rothschild, et al., 1986a).

Regression models can also be constructed to examine dominance in one hemisphere relative to the other. These also show complex processing; rational commercials show

stronger models for left dominance while emotional commercials show the reverse (Rothschild, et al., 1986a).

In comparing the right and left time series for each commercial, we see significant correlations for the two hemispheres which indicate parallel processing, but a great deal of unexplained variance to allow for dominance (Rothschild, et al., 1986a).

The above findings are from the occipital lobe. In the frontal lobe there are significant correlations that show positive affect being dominant in the left hemisphere while negative affect is dominant in the right (Reeves, et al., 1986).

Several replications and reliability tests have been done across the two studies; in addition the data are quite consistent with the EEG literature (Rothschild, et al., 1986a).

Conclusions

These findings are only a small subset of what we have uncovered; they show the enormous complexity of the brain and of studying hemispheric laterality. This point could be made with other EEG data as well, but reflects work with which I am familiar.

The three papers presented in this session are good examples on at least two dimensions. Positively, they show a part of the wide range of topics that can be studied through hemispheric laterality. Negatively, they show the difficulty of deriving strong findings in an area where, at best, findings are weak and where the confounding issues are quite complex.

I am convinced that this area will be a worthwhile one for consumer research to pursue and would encourage more work on the topic. At the same time I would urge extreme care in the design of studies that can so easily yield no results on the basis of seemingly minor oversights.

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ADOPTION OF AN INCREDIBLY COMPLEX INNOVATION:
PROPOSITIONS FROM A HUMANISTIC VANTAGE POINT

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ABSTRACT

A HUMANIST INQUIRY

Five propositions are presented concerning the adoption of complex innovations having technological and symbolic features. These were derived from a humanistically-based method combining introspection and participant observation. The primary innovation context from which propositional knowledge was derived was that of child care services.

INTRODUCTION

If one examines the diffusion of innovation literature in even a casual fashion, one will be struck with two verities. First, the great majority of innovations whose diffusion patterns have been studied are primarily technological products, such as medicines, agricultural supplies, industrial machinery, electric appliances, and so forth (cf. Bass 1969, Czepiel 1974, Rogers 1983). In contrast, much less research has been done on innovations which process both symbolic and technological content (cf. Hirschman 1983; 1986). Second, virtually all the innovation diffusion studies conducted have assumed the innovation in question was static in nature, -- that its characteristics were immutable, at least in the short run decision making horizon. Thus the literature in general has been focused upon static entities whose functional properties are generally tangible and often objectively verifiable in advance. The primary task confronting potential adopters of such innovations is to gather the requisite data for determining if the innovation will meet their needs/wants at a lower "cost" or with greater effectiveness than the product they are currently using (Hirschman 1980; Robertson and Gatignol 1985; 1986).

In contrast, the present study examines child care services -- a set of innovations, which in addition to having complex technological components (e.g., safety features, location, hours of operation, specialized equipment) also have highly sophisticated symbolic aspects (e.g., social prestige, nurturance ability, philosophical orientation, potential for intellectual stimulation). To add to their inherent technological and symbolic complexity, these innovative services also have two other complicating characteristics. First, they are a rapidly evolving set of alternatives; new options (e.g., au pairs) are appearing on the market, whereas the availability of traditional alternatives is declining (e.g., grandmothers, older siblings). Thus, accurate data gathering by potential adopters is frustrated by the constantly changing set of products.

Second, unlike the majority of all innovation adoption decisions studied thus far, the childcare product is purchased not for self-consumption, but rather for a less-knowledgable client -- one's child. Further, this client has needs and wants that also are characterized by continuous, rapid evolution; child care options appropriate for a month old infant are usually not suitable for a two year old toddler or a four year old preschooler.

Thus in many ways the child care decision involves coping simultaneously with two innovations, both of which are dynamic: the child, which was "adopted" by birth, and the child care service, which must be adopted by purchase. Both are situated on upward trajectories of complexity and surrounded by increasing uncertainty as the parent/adopter looks into the future. In short, the parent is confronting an incredibly complex innovation adoption decision -- perhaps the most complex -- and one whose consequences have large positive and negative potential.

Because I have recently converted from the positivist metaphysic to humanism, the discussion presented is based on the humanistic methodologies of introspection and participant observation. However, even in my orthodox positivist days, I do not believe I would have tried to model quantitatively (or believed that somebody else could have modeled quantitatively) the childcare adoption process. It simply is too emotional and too subjective to be investigated in an objective, analytical fashion. People may adopt computers based on the dry rationality posited by information processing theorists (although even this, I doubt), but they most certainly do not evaluate childcare options that way.

Postponed Decision Making

How do people evaluate childcare alternatives, and what insights might we gain about complex innovation adoption and diffusion processes, generally, by an examination of childcare choice? The first proposition that emerged from introspective and participant observation inquiries¹ was somewhat counter intuitive, or at least counter to what some information processing theories would lead us to expect. I found that, in most instances, childcare information gathering and the actual decision, itself, was postponed for as long as possible -- usually until at least the eighth or ninth month of pregnancy and often until after the child was actually born.

At that time, the couple usually "panicked", realizing that they must act, and began thrashing through information on child care alternatives, often making two or three unsatisfactory innovation adoptions before an acceptable option was found. Why did this seemingly haphazard behavior occur among well-educated, affluent consumers who are normally rational, deliberative decision makers? The answer seems to be that the utter complexity of the task overwhelmed their ability to approach the innovation alternatives ahead of time and, therefore, they waited until they were literally forced into action by the acquisition of a novel personal role -- parenthood.

The birth of a baby, is a very disruptive event in the parents' lives. Babies are discontinuous innovations (Robertson 1971), and also are indivisible, economically expensive, complex, require major role adjustments, come with no service guarantees and are not returnable to the place of purchase. Hence, when a child one arrives in a couple's life, the couple first has to learn how to cope with the presence of this strange novelty, before they are able to cope with the decision of what novel childcare service they will adopt. In essence, they have to acquire "hands-on" experience with the baby innovation before they are mentally and emotionally equipped to consider alternatives for the childcare innovation.

I believe this proposition may extend to some other types of complex innovation adoption decisions as well. For example, it is my experience that many people purchase a personal computer before they have learned to program it

¹It should be noted that the author and her husband constitute a dual professional family, whose first child was born during their thirties. The other couples about whom I am knowledgeable and upon whose experiences this paper is based have the same characteristics.

(and sometimes before they have had any computer experience at all). Many, probably most, people engage in sexual activity for the first time, before they have adopted birth control (sometimes with disastrous results). Many people wait until their parents are seriously disabled before considering any senior care options. In each of these cases innovation adoption activity is precipitated by the more or less irreversible acquisition of an additional personal role that was foreseeable -- e.g., computer owner, lover, guardian of disabled parent, - but viewed as so complex that other subsequently required innovation adoption decisions were postponed. I do not mean to imply that these consumers are necessarily acting irrationally or irresponsibly. In such situations we often do not know what we should do until we are actually in the process of doing it. In a very real sense, parents may have to care for their baby before they are able to decide how best to have it cared for. A person may actually need to have a computer before deciding how best to program it. One might actually need to make love before deciding how best to prevent pregnancy. One might need to observe and be with a disabled parent before deciding what kind of care is best for him/her.

The Role of Prior Experience on Tangible Attribute Preference

The second proposition I would like to suggest is that consumers' initial conceptualization of the best childcare innovation option is most often derived from their own experiences as children -- thus, in most cases, they would like to have someone care for their child who is as much like their own mother as possible. In fact, if the truth be known, many new parents would prefer that their mother take care of the baby (after all, she did a great job with them). However, this is virtually never feasible as grandmothers these days are usually off pursuing their own activities and are generally unwilling to assume full-time (or even part-time) child care responsibilities. What frequently happens, therefore, is that the new parents decide to adopt the child care innovation that most resembles their own mother in form and function i.e., a live-in housekeeper. A live-in housekeeper, for those of you unfamiliar with this innovation, is a woman somewhere in the range of 20 to 60 years old who lives in your home, cares for your children, does the house cleaning and laundry, and often cooks, as well. The live-in housekeeper also is the most expensive childcare option available (salaries range from \$150 - \$300 week). However, among the parents with whom I am familiar, this was by far the most commonly adopted innovation, because tangibly she most resembled a traditional mother.

However, a live-in housekeeper may not possess the appropriate characteristics for child care. This is frequently overlooked by adopters, who are so intent on acquiring the child care innovation option that most closely resembles in tangible characteristics their own childcare experiences, that the less tangible functional aspects are ignored. The proposition that the form of an innovation may dominate its functional characteristics in determining the likelihood of adoption, I believe to be generalizable to other contexts. In a broader context it would be stated: the more an innovation option resembles in tangible structure the traditional solution to a problem, the more likely it is to be adopted, regardless of its actual ability to perform the requisite task. This is especially true for highly complex innovations containing symbolic features for which the consumer lacks confidence in a priori evaluations. Therefore s/he must rely almost exclusively on tangible features in making a choice; These features may be nonisomorphic to the actual functional qualities of a particular option.

The Role of Prior Experience in Shaping Functional Expectations

A third proposition I would like to suggest is that the functions performed by the traditional model (in this case, a mother-housewife) may not be as good as the functions performed by innovative options currently available (i.e., other child care service alternatives). However, consumers' prior positive experience with the traditional model (i.e., Mom) may 'blind' them to the functional superiority of novel alternatives and cause them to focus upon a smaller set of functional characteristics or a less optimal set of functional characteristics.

Traditionally in the U.S. the ideal childcare alternative has been believed to be the full-time mother who stays at home with the children, carefully nurturing them and attending to their needs. She is available 24 hours a day and, because the children are her own progeny, she is believed to be the person most dedicated and motivated to caring for them. The childcare functions the traditional mother performed, therefore, came to be seen as the optimal set of functions and childcare alternatives that deviated from that format were viewed as suboptimal. Women who pursued careers outside the home felt guilty because they were not able to be full-time mothers to their children; their children were suffering, they felt, because some less-perfect childcare solution was being used.

As with many other innovation contexts, I believe, this reasoning is faulty. Full-time day care centers, for example, deviate most markedly from the traditional mother format. There are multiple, unrelated care givers and multiple, unrelated children all interacting in a scheduled, ordered environment. Quite the opposite of the one-to-one, spontaneous relationship between mother and child. And yet several studies (e.g., Sarafino 1985; Webb 1984) and personal experience suggest that many children flourish in a day care environment. Research indicates that children's I.Q.'s, physical development, and social skills are consistently enhanced by the day care experience, as compared to SES-matched children in the care of traditional mothers. Further, the more time the children spend in the day care environment, the greater this positive discrepancy with home-raised children becomes. After two very frustrating experiences with housekeepers costing \$250 a week, I enrolled my shy, quiet, daughter Alix in an \$80 per week (meals included) public day care center. I was filled with apprehension and guilt, sure she would be traumatized and overwhelmed by the experience. Four months later, I have a daughter who swings, slides, runs, shouts, reads, counts, sings, paints, brushes her teeth, washes her hands, picks up her toys, says please and thank you, and eats nutritious food three times a day. She is vastly ahead of where she was staying at home with her 'mother substitute', and vastly ahead of where I was at her age, despite the concern and attention of my loving, Phi Beta Kappa mother. The point is, day care centers often do a better job of child care than do traditional mothers because they were innovations specifically designed for that task. They perform more functions than does the traditional mother, and they perform them with a higher level of competence.

To what other innovation contexts might this be generalizable? Several come to mind in the services marketing area: consumers now seek and receive advice from specialists in a wide array of choice areas that were once restricted to personal decision making. There are now consultants in wardrobe purchasing, SAT preparation, portfolio management, home decorating and lawn care. Each of these service providers performs a function that, until relatively recently in our culture, was performed by the consumer personally. Consumers have adopted these service innovations because they found that the function was performed more competently by a specialist than by

themselves. This type of innovation adoption, and the conditions that precipitate it, has been described in greater detail in an article by Solomon (1986).

The Role of Social Class

A fourth proposition suggested by childcare experiences is that social class norms may serve as constraints on the range of innovation options considered. In the innovation adoption literature, income level of the adopter and price of the innovation are both cited as factors influencing adoption probabilities (cf, Roger 1983). Generally, the higher the income of the potential adopter and the lower the price of the innovation, the more likely it is that adoption will occur (i.e., economic risk is minimized under these conditions). However, social class normative constraints surrounding the child care adoption decision may convolute this straightforward logic. Now obviously, consumers having low incomes are constrained in their ability to adopt the most expensive (and perceived most deluxe) childcare option -- a live-in housekeeper. They simply cannot afford the \$250 per week needed to purchase this "mother substitute" to care for their children; and thus, their children are sent to the most affordable, and least deluxe, type of child care service -- the public day care center.

However, not quite so obviously but just as consistently, upper income parents are symbolically constrained by social class norms from adopting all but the most expensive (and perceived most deluxe) childcare options. This means that for parents of Upper Middle or Upper SES the only socially acceptable childcare options are live-in housekeepers and (less desirably) private nursery schools. Thus, just as low incomes may prevent poor parents from hiring housekeepers, social class norms ("what will the neighbors say") prevent rich parents from adopting low cost childcare service innovations.

Of course, the underlying assumption supporting this social class normative constraint is that higher priced childcare options are also higher in quality. As stated earlier, personal experience has led me to strongly doubt the strength of the price/quality correlation with regard to childcare services. But, personal experience aside, the fact remains that the innovation literature generally has failed to consider the constraining role that social class norms may play in many adoption decisions. Several innovation options may be eliminated from serious consideration simply because they are not appropriate for people "of a certain class" irregardless of their ability to perform the desired function more efficiently or effectively than other options.

The More Things Change ... The More They Don't Stay the Same

A fifth, and final, proposition I would like to put forward concerns the dynamic nature of complex innovations. The continuous flux and instability of these innovations and their adopters is perhaps most vividly evidenced by the childcare decision, but is present in other contexts, as well. Quite often in the literature an innovation is depicted as a stable entity -- a collection of tangible attributes that the adopter need only learn about in order to reach an adoption decision. Similarly, the adopter is generally depicted as a stable human being knowledgeable about his/her own preferences and desires. In childcare innovation adoption decisions, neither of these conditions holds true.

First, as noted earlier, childcare alternatives and their characteristics are in a rapid state of transition. In my community, for example, two new private day care centers have just opened, a church-affiliated nursery has closed, two new agencies are offering nanny and au pair referral services, and the senior citizens center has

initiated a "rent-a-grandmother" service. Hours, costs, and functions associated with each of these novel options vary widely, making direct comparisons impossible. Similar proliferation of childcare innovations likely confronts parents elsewhere. And similar situations of innovation overload confront consumers of personal computers, compact disc stereo systems, zero-coupon bonds, adjustable rate home mortgages, and other complex, rapidly-evolving innovation contexts.

There is a second dynamic factor in the childcare innovation adoption decision, however, -- the child. I have discovered -- as I am sure other parents have -- that just as I have finally figured out what combination of intellectual, physical, and emotional resources my child needs, she changes. The toys that were her favorites last month, now lie discarded; the games that used to fascinate her, now are boring. Similarly, the childcare innovation option that was best at 6 months is inappropriate at 18 months, and so on. Unlike "theoretical" consumers who know what they want and remain stable in their preferences over a given time period, children do not always know what they want (and are even less cognizant of what they need), and their parents -- who ostensibly are making informed decisions for them -- know even less. Thus, in reality, the decision process for adopting a childcare innovation incorporates elements not only of Simon's (1967) concept of satisficing but also of Kassarjian's (1986) notion of muddling through.

Parents mentally and physically lurch along, examining brochures, calling referral services, visiting nursery schools, talking to friends, interviewing prospective live-in employees, wringing their hands and coping with waves of guilt. When they have reached their upper limits on physical, mental, and emotional exhaustion (which is necessary to assuage the guilt) they pick an alternative, likely influenced as much by their feelings toward their mother, their social class mobility, and the choices of their friends as it is by a direct consideration of service quality. The child is then immersed in the innovation chosen and his/her response is carefully observed. If the child seems to react with at least a minimum degree of satisfaction, the innovation is adopted for a continued time period.

Innovation Proliferation

Thus this final proposition may be simply stated as: the more rapidly proliferating the number of specific alternatives within an innovation context, the lower the threshold of acceptable performance will be for a selected alternative. Consumers, when confronted with over choice among a set of complex novel options will tend to set lower standards of acceptability for any given option. Thus, whatever option the consumer happens to adopt first has a high probability of being continued. Large levels of dissatisfaction are necessary before the option will be discontinued.

A strong irony here is that many of the innovation contexts whose specific options are rapidly proliferating (e.g. child care services, adjustable rate mortgages) are those having a direct impact on consumers' quality of life. Thus there may be a tendency to satisfice and muddle through those very decisions whose outcomes have the most potential for increasing or decreasing consumers' happiness.

CONCLUDING COMMENTS

The foregoing discussion has put forward some propositions regarding the adoption of complex innovations possessing both technological and symbolic features. These propositions were derived from introspective analysis of the author's own decision processes concerning childcare services and from ad hoc conversations with other parents confronting the same innovation adoption task. Although I

am not in favor of the indiscriminate use of self-centered analysis as a method of generating scientific data, certainly there are areas where our personal experiences as consumers (not scientists) can provide constructive insights into consumption phenomena. The transferability of the insights provided in the present paper to other contexts remains to be assessed. It is my hope that others will explore them.

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MARKETPLACE DYNAMICS:
THE P'S OF "PEOPLE" AND "PROCESS"

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Abstract

To date, marketing has been studied largely from a "positivist" perspective. In contrast to this "cause" or "factor" oriented paradigm, an alternative model is proposed. From a symbolic interactionist perspective, marketing is viewed as a process which is best understood by examining the actualities of ongoing human interaction. Marketing is defined by the relationships (including preparations, encounters, and subsequent adjustments) of the involved parties and the (symbolic) meanings of the objects being exchanged. By focusing on the "activities" in which people find themselves engaging, the perspectives of the people involved, their ongoing definitions of the situation, and the processes by which they work out their activities with others, this statement offers a dynamic framework from which to view marketing activity. If marketing theory is to "come alive," it needs to be more sensitive to the actualities of the marketplace. It must be prepared to examine marketplace behavior as "social activity."

Marketplace Dynamics

In their opening statements to an American Marketing Association conference, Bagozzi (1979), Enis (1979) and Lutz (1979) observed that there had been little new conceptual work in the field of marketing over the last several years. This, they claimed, was particularly true of buyer-seller encounters and the relationships emerging therein. In addition, several others (Hunt, 1983; Anderson, 1983; and Deshpande, 1983) have more recently commented on the domination (and subsequent restrictiveness) of the positivist tradition in the field of marketing. The (positivist) emphasis has been on arriving at "facts," "models," and "formulae" designed to better able marketers to predict and control the business world. The preponderance of this approach may facilitate managerial practices. But, as Anderson (1983) contends, it does not lead to an increased understanding of marketing as a generic human activity. Consequently, with the exceptions of Bonoma and Zaltman (1978), Levy (1978), and Reingen and Woodside (1981), there have been few attempts to understand marketing as a fundamentally "social phenomenon." To better appreciate the actualities of the marketplace, we need an alternative conceptual scheme, along with a methodology sensitive to the understanding of marketplace dynamics.

Building on "symbolic interaction," a sociological social psychology (Mead, 1934; Blumer, 1969), this paper draws attention to the fundamentally social nature of marketplace activity and provides a conceptual scheme sensitive to the "Ps" of "people" and "process." By recognizing the perspectival, reflective, negotiable, relational, and emergent nature of human behavior, it makes marketing theory attentive to the actualities of exchanges. Thus, in-depth interviews, participation, and observation of buyer-seller activities are seen as vital in enabling researchers to better approximate the perspectives of the participants to the exchange, as well as their uncertainties, strategies, and ongoing adjustments to one another.

Marketing as a Social Science

So far, those in marketing typically have focused on questions of the sort, "What makes salespeople sell more?" and "Why do customers buy certain products?" Relying heavily on experimental social psychology and survey research, and intensively searching for "factors" and "causes" of behavior, as well as "formulae" to better predict and control buying behavior, this approach is both arbitrary and prescriptive. It is arbitrary because it neither depicts

the world experienced by the participants in the marketplace, nor studies the interaction between them. The emphasis has been on controlled quantitative data collection and on hypotheses testing. With this approach, the dynamics of the marketplace are reduced to static and one-sided versions of reality, and the data collected has been extremely narrow in nature. It is prescriptive because it is intended to make marketing a more efficient tool, rather than a phenomena to be studied in its own right. Surprisingly scant consideration is given to the "actualities of doing business in its natural setting." It is here, by drawing attention to the social nature of all marketing and sales activity, and by depicting the ways in which these activities are worked out by the parties involved, that symbolic interactionism can make contributions to what is already an immense literature.

Market Mix

The concept of "market mix" represents a major attempt to provide a conceptual scheme for the field of marketing. Thus, in what has become a classic in marketing, Borden (1964) introduces the "4 P's; product, price, promotion, and place (distribution). Although not always guided by this scheme, many research endeavors can be subsumed by these concepts. These include studies (and evaluations) of product lines, packaging and identity, pricing structures, trends, and discounts; promotional efforts through the media, management, and salespeople; and locations, layouts, and designs.

While promoting an order in a discipline characterized by fragmented realms of study, market mix (as presently formulated) neglects the two most important "P's," those of "people" and "process." It fails to appreciate the social and emergent nature of the marketplace. If marketing denotes the study of buyer-seller interaction, then "people" and "process" should represent central themes of marketing.

When speaking of "people," it is critical that we appreciate the perspectival and self-reflective nature of "minded behavior." Not only do people acquire perspectives (i.e. "world views," "conceptual schemes," "interpretative frames"), but they also develop capacities for taking themselves (and others) into account in developing lines of action. They are not mere targets of action, they are planners and doers. People interpret situations in reference to themselves (perspectives, interests, identities). Further, insofar as they influence (negotiate and develop bonds with) one another, people's behavior cannot be causally reduced to their individual qualities.

It is also vital that we recognize the "processual" nature of group life. This is one reason that interaction is problematic in its outcome. Interaction represents the "working out of exchanges." As encounters take place within an ongoing time-frame, participants can intend to selectively present themselves to others, but they can also assess their interchanges, and reorient their action towards one another on an ongoing basis (as they take themselves and others into account). By focusing on the P's of "people" and "process," the remainder of this paper will indicate how the symbolic interactionist perspective can be used to generate a better understanding of marketplace exchanges.

¹As Anderson (1983) notes, it will be difficult for marketing to acquire the status of a "science" unless more attention is given to the task of acquiring "knowledge for knowledge's sake."

Business involves the exchange of goods and services, but it is fundamentally "social activity." Not only (1) are all exchanges best seen as denoting "relationships" among the parties involved, but (2) even the meanings of the objects being exchanged reflect emergent group interactions. This means that vendor activities need to be examined in reference to their pre-sale preparations, direct customer contacts, and their post-contact behaviors, as together these define the "social activity of marketing." While direct vendor-prospect interaction is most obviously subject to negotiation, all vendor activities pertaining to those exchanges (before, during, and after) are of significance for understanding those encounters and any subsequent vendor-prospect encounters.

It is also crucial that the meanings that people have for "objects" be considered in reference to their social nature. The "value" of objects arises not from any "inherent properties" or "objective worths." "Worth" is the value "attributed to objects by prospective buyers" (a valuing which may be shaped by the vendor and others). Thus, central significance should be given to the "symbolic nature of exchange;" to the meanings of objects as attributed to them by those engaged in exchange. Although there may be but "one exchange," any exchange may be seen in several different ways by the participants and any other observers (A) in anticipation of the exchange, (B) as it unfolds, and (C) in retrospect.

Sales might be most basically defined as "exchanges of goods," but like all social behavior, marketplace exchanges may entail a great deal of anticipation, assessment, and ongoing adjustment on the part of those involved. Exchanges involve commitments on behalf of all participants, and the resultant alterations in "goods" can significantly effect the subsequent experiences of those involved in the exchange. As such, one finds the weighing of resources, the assessment of options, the anticipation of consequences, and the emergence of strategies designed to enhance one's position. With some experience, also comes the recognition of similar concerns on the part of others, mutual capacities for deception, opportunities for misunderstanding, and possibilities of disappointment.

Exchanges (and the activities involved thereof) can be challenging, reflecting adversity, excitement, risk, and failure. Likewise, they can be entertaining, stimulating, refreshing and creative, as well as dull, uninspiring, and boring. Buyer-vendor encounters afford opportunities for persuasion, diplomacy, deception, and pressure, but they may also entail inquiry and assessment, honesty, and trust. Marketplace exchanges are far from a simple (and very misleading) matter of "supply and demand."²

Viewed in these ways, it becomes evident that business is (1) "perspectival," reflecting the viewpoints, interests, and interpretations of the involved parties at any given points in time. Business is likewise (2) "reflective" in that people have capacities to define themselves in relation to others, and to take themselves and others into account in developing lines of action. Further, business is (3) "negotiable." Participants may influence and/or be influenced by others, not only in reference to settling on the "desirability" and "monetary value" of items, but also in reference to any definitions of self and others that might be introduced as relevant to the issue by one of the parties. Like other aspects of life, business assumes a (4) relational quality. People develop bonds with one another and these alignments impact upon future transactions (e.g. trust, loyalty). Business is also (5) "processual," denoting the emergent and problematic nature of interaction. Actors may plan and anticipate certain outcomes, but marketplace exchanges entail cooperative behavior on the part of the parties involved, as they (jointly) work out their encounters.

²Readers are referred to Simmel (1978) for the statement which most clearly nullifies the notion that "value" is contingent on supply and demand.

Blumer (1969) uses the term "joint activity" to refer to the processes by which people work out lines of action with respect to one another. This concept is most relevant to the sales setting as buyers and sellers take one another (and themselves) into account and proceed to "jointly construct" their encounters.

The notion of joint activity does not presume that the parties involved take equal initiative or that they have equal impact on the emerging interaction. However, it does alert us to the "cooperative" and "processual" nature of interaction. It means that no matter how "convincing" one vendor may be (compared to others), any encounter involving that vendor and any prospect is subject to definition and negotiation (including termination) on the part of the prospect. The vendor's "success" (making the sale) is contingent on the prospect's willingness to make the appropriate commitments. Even though vendors may plan and attempt to move the interaction in specific directions, the ensuing interaction may assume directions (and outcomes) quite at variance from those intended by either the vendors or the prospects.

Vendors may "sell products," but they are "selling products to people." Thus, in contrast to those who work with aluminum or plastics, for example (in which quality control can be rather sharply defined), salespeople face the task of working with "materials" which are not only (1) quite variable, (2) complex, and (3) unstable,³ but which can also (4) assess the vendors' procedures as these pertain to their own situations,⁴ and (5) act back upon the vendors. Thus, it is one thing to "know one's products" and to be able to "present them" in a general sense, but it is another thing to obtain purchasing commitments regarding those items from others. In this respect, it is essential that vendor-buyer relationships be considered with regards to "impression management."

Marketing as Dramaturgical Activity

Since purchases reflect the "images" the prospects associate with purchasing situations, vendors typically wish to "present themselves" (and products) in ways prospects will find appealing (acceptable minimally). Nowhere is the practice of "impression management" more carefully explicated than in the works of Erving Goffman (1959). Recognizing that people are self-reflective beings who can take themselves and others into account, Goffman shows how people may selectively "present themselves" to others to promote particular definitions (of self) by others.

In examining "impression management," Goffman is not concerned with people's "true selves," but rather with their "projected selves;" the "images people present to others." Recognizing that persons may find it advantageous to be seen in certain ways and may attempt to influence the ways in which others define them, Goffman indicates how persons may promote ("give off") particular images of themselves to others.⁵

³The term "unstable" denotes the abilities of people to change their viewpoints, emphases, and strategies in very short periods of time. Thus, in contrast to properties attributed to inanimate objects, those attributed to persons are highly vulnerable to error.

⁴This capacity for "self-reflectivity" (to be an object unto oneself) fundamentally distinguishes humans from other "objects." As "objects unto themselves," humans may not only take themselves into account in planning lines of action, but also recognize the abilities of others to do so as well.

⁵It needn't be assumed that people are always concerned with "giving off" and/or "reading" impressions. The participants can vary greatly in the degree of concern they experience in either "portraying" or "monitoring" impressions.

Rather than making claims about people's "true selves,"⁶ the emphasis is on people's presentations of self and the interpretations of these presentations by others. These (ongoing) presentations and interpretations, Goffman posits, are central to the emergence and maintenance of "social order." While any presentation may entail some insincerity, Goffman views "impression management" as an inevitable aspect of group life as the participants attempt to deal with others in ways they most prefer.

Everyday "audiences" (viewing the world as a stage) are all those who witness people's activities. In contrast to theatrical settings, however, everyday audiences may much more readily "join those on stage." In the process all involved can be seen to jointly develop (negotiate) the "scenarios" they experience. Each participant may have certain objectives in mind, but so may the others. And, although some participants may assume the role of supporting casts, others may be much less cooperative. Hence, people find themselves making ongoing adjustments to others, fitting their preferred lines of action into the emergent (and negotiable) encounters in which they find themselves. Goffman's everyday actors are more dynamic than their stage counterparts; their obstacles are greater and their resources, subsequent lines of action, and outcomes are much less clearly defined. They may endeavor to present themselves in certain ways, but their successes in doing so are clearly dependent on interpretations of their behaviors by others.

Seen in this manner, people are not "just actors," they are "interactors" whose life-chances are dependent on how their performances are received by others. Reflecting a mixture of viewpoints, unfolding exchanges, uncertain outcomes, and opportunities for input from all parties, sales-related encounters can be considered in "dramaturgical" terms. As with actors in a play, salespeople can be seen as "on stage" as they enter the prospect's presence. But, unlike people witnessing plays, their prospects may play a more direct, interactive role in the process. As in all everyday encounters, salespeople are dependent on the "cooperation" of those with whom they interact. Vendors may have scripts from which to work, but they will also find themselves negotiating encounters with prospects and making ongoing adjustments as these encounters take place. Impression management, thus, is best seen in processual terms as buyers and sellers make ongoing adjustments to one another. Each party may have his own anticipations and experiences to draw upon, but the encounter is to be worked out with much less certainty as to outcome.

Research Methods

Given concerns with a processual, people oriented study of marketplace exchange, it seems appropriate to indicate the general strategies of research most consistent with these concerns. Interactionism makes five basic and interrelated demands on researchers.

First, there is the concern that researchers attend to the meanings people attach to the situations in which they find themselves. Thus, attention is given to both the perspectives (viewpoints, interpretative frames, paradigms) with which people approach situations and the implications of these viewpoints for the meanings people attribute to situations. Important, likewise, are any shifts in the perspectives from which people view situations.

Second, this approach acknowledges people's capacities for "minded activity," including therein people's abilities to interpret the situations they encounter and to take multiple aspects of situations (including past experiences and future projections) into account when considering ongoing situations. In addition to defining other objects (vs.

reacting to stimuli), minded activity includes capacities for "self reflectivity" (being an object unto oneself) "role taking" (taking the perspectives of another into account), and "impression management" (managing images given off to others). As with other objects, one's views of self and others may change over time, and researchers would want to be sensitive to these aspects of interaction as well.

Third, recognizing that "we are all in this together," interactionism prompts a methodology sensitive to the negotiable nature of everyday life. Not only may people take others into account (via role-taking), but people are also apt to find themselves attempting to influence others (suggestions, strategies, resistances, conflicts, cooperation) and being subject to influence from others as their interactions unfold.

Fourth, this approach draws attention to both the continuity and selectivity implied by people's tendencies to develop relationships with one another. While some encounters are quite fleeting, people's past experiences with particular (and generalized) others may figure prominently in their future plans and activities.

Fifth, interactionism requires that researchers appreciate the processual nature of group life, that we attend to the "histories" or "careers" of the phenomena (activities, identities, commitments, perspectives, and relationships) being studied. This emphasis on the natural history of occurrences contrasts sharply with correlational research which flattens (or artificially imposes parameters on) time. Working from this tradition, researchers give much consideration to the unfolding or sequencing of events and assess consequences within the emergent contexts in which they take place.

These guiding principles suggest that we study group life relative to: (1) the meanings people develop relative to the situations in which they find themselves; (2) the capacities people have for taking themselves and other people into account in contemplating and developing lines of action; (3) the negotiable nature of human encounters; (4) the desirability of contextualizing action within ongoing relationships; and (5) the processes through which events take place.

A People and Process Methodology

The central task of an interactionist methodology is that of achieving "intimate familiarity" with the dynamics of group life. To this end, three methodological approaches are indicated along with brief statements on their respective capabilities and limitations. These are observations, interviews, and participant-observation. While these may be combined to achieve a more thorough appreciation of the phenomenon under study, this may not be feasible in every case.

Observation. Reflecting a form of "first hand" experience, observation may provide researchers with (A) ideas for subsequent research, (B) coding schemes and frequency counts, and (C) opportunities to assess information gathered in other ways. Observation allows for exploration, tabulation, and verification. Beyond visual modes of observation, researchers would also find it valuable to attend to conversations among the parties being studied.

The major limitation of observation alone, is that so much must be inferred from "surface impressions." Observers may penetrate back regions and/or uncover inadvertent disclosures, but researchers are left to infer meanings about people and their activities from "what they witness." They can easily miss people's preparations, dilemmas, negotiations and strategies. Researchers relying exclusively on observation fail to benefit from the (typically rich) set of accounts (histories, observations, interpretations, explanations, and qualifications) the participants can provide.

⁶Goffman avoids the very thorny and elusive phenomenon of the "true self" by concentrating on the selection, presentation, and interpretation of people's "social selves."

Interviews. Whether combined with observation or used on their own, interviews represent a valuable means of arriving at a more complete understanding of people's experiences and concerns. Interview material depends heavily on the cooperation of those being studied. But when participants are given adequate opportunity to express themselves, interviews can generate great detail in reference to meanings, reflections, negotiations, relationships and process.

The main limitations of interviews are those pertaining to the accuracy and comprehensiveness of the accounts obtained. Interviewees may intentionally mislead interviewers, but researchers can facilitate honest and complete statements by the ways in which they approach and conduct interviews. Generally speaking, more inquisitive, patient, interested, and nonjudgemental approaches seem to fare better. The effective interviewer is first and foremost a good listener. When people feel rushed, directed, or judged, they are less apt to provide researchers with complete and accurate information. And, insofar as the researcher learns more about a situation from one interview to the next, inquiries should be more insightful and more thorough as the interviews proceed (each interview advantaging the interviewer for the next).

Participant Observation. The third major research strategy is that of the researcher actively engaging in the subject matter being discussed. While the participant-observer strategy of research denotes a rich data base in its own right, it can become even more powerful when combined with more extensive interviews and observations. Each can alert the researcher to matters pertinent to the phenomenon under study, and each provides a base for assessing information obtained by these other means. Whether involvements precede or overlap with these other modes of investigation, this "inside dopester" role can be extremely valuable in developing more insightful interviews and in allowing researchers to make more informed observations. Since participants are generally less obtrusive observers than others, they may be able to more readily access other information than would other researchers.

The participant observer role also has some noteworthy limitations. To the extent these insiders (A) "presume" rather than inquire into the activities of others, (B) moralize and/or attempt to educate others, or (C) take sides (or are so perceived), their information generally becomes less valuable. Access to certain others may also be severely jeopardized by virtue of their role involvements. Finally, while outsiders may have difficulties (time, contacts) entering and being accepted in a particular role, so may insiders find it difficult to sustain the role of the researcher (i.e. they become "absorbed by the role being studied," the anthropologists use the term, "going native").

While one person may be able to obtain information in each of these means (observation, interviews, participant-observation), researchers may also find it valuable to work in teams. Teamwork can be troublesome in some respects (e.g. uneven contributions, different perspectives and objectives), but it may allow researchers to access (and evaluate) more information than may a "lone wolf" approach. It means, for instance, that researchers may be able to participate in several roles in a research site, access a greater number/assortment of participants, and make more sustained observations than might a solitary researcher over the same time frame.

Conclusion

This paper offers a "bottoms-up" approach for understanding marketing activities by being sensitive to the actualities of social interaction in the marketplace. In contrast to marketing approaches, people are viewed not as the (unthinking) targets of marketing strategies but as actors with capacities to interpret situations and select courses of action. In addition, the interactions that take place between buyers and sellers are seen not as static one-time occurrences but as evolving over time as people anticipate, assess, and adjust to each other and

the situations in which they find themselves.

Positivist research may be useful for improving the effectiveness of marketing strategies from the marketers' point of view, but this "top-down" approach to research and theory is not true to the subject matter under investigation. Hence, instead of searching for simplistic "causes" or "formulae" designed to enable marketers to control buying behavior, the approach outlined herein is concerned with the understanding of marketing as generic human activity. By acknowledging the "P's" of "people" and "process", we may develop a framework for better understanding how people become involved, stay involved and make decisions about future exchange activities.

In conjunction with an approach sensitive to the perspectival, reflective, negotiable, relational and processual nature of marketplace exchanges, an alternative research methodology is required; one sensitive to the complex and problematic nature of human interaction. Survey methods, hypotheses testing, and the use of statistical procedures do not and cannot adequately recognize the emergent, social nature of group life. Instead, we need to attend to the "natural histories" or "careers" of marketing activities through observation, interviews and participant observation.

Defining as "empirical" only that which can be measured, some may criticize these methods as being subjective and nonempirical. In contrast, we view empiricism as a method of study which endeavors to be true to the phenomenon under study. Thus, if people can view the "same objects" differently, one to another, or over time, then some appreciation of multiple meanings seems incontestable. If people are able to think and can assess themselves and others, then some notion of reflectivity should be incorporated into the study of human behavior. If people can influence others, and be influenced by them, then the negotiable nature of group life should be appreciated. If people selectively interact with others, both in immediate situations and over time, then we should be prepared to acknowledge the significance of these relationships for their behaviors. And, if there is an emergent quality to human life, then we should be sensitive to that as well. These "natural qualities" of human life (and marketplace exchange) have been overlooked by conventional research for much too long.

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GENERIC SOCIAL PROCESSES: IMPLICATIONS OF A PROCESSUAL THEORY
OF ACTION FOR RESEARCH ON MARKETPLACE EXCHANGES¹

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Abstract

In contrast to many "social science" models which rely on the techniques of the natural sciences for gathering and analyzing data on human behavior, this paper outlines a theory of action which builds fundamentally on qualities distinctive to (human) group life. Following an introduction to the theoretical premises on which an interactionist theory of human behavior is founded, consideration is directed toward the basic ("generic") social processes around which action is developed. As abstracted "forms of association" (Simmel, 1950), these processes not only provide much stimulation for research on consumer behavior, but also enable researchers in the area of consumer behavior to actively contribute to an emerging theory of human behavior.

Introduction

Addressing notions such as recruitment and persuasion, resistance and negotiation, trust and commitment, identities and relationships, this paper locates the study of marketplace exchange within the context of a general theory of action. Rather than posit that we need a separate theory for consumer behavior, it is proposed that the study of consumer behavior not only tap into existing notions of human interaction, but that it be used to provide feedback and refinement to an emerging theory of action which is grounded in the day-to-day experiences of the people we study.

This theory of action is fundamentally based in "symbolic interaction." It has its roots in the works of the philosopher George Herbert Mead (1934) and has been most comprehensively and clearly expressed by the sociologist Herbert Blumer (1969). Those working within this tradition also recognize the conceptual affinity of this approach with "dramaturgical sociology" (Goffman, 1959; 1963), "labeling theory" (Becker, 1963; Lemert, 1967), "reality construction theory" (Berger and Luckmann, 1966), "ethnomethodology" (Garfinkel, 1967, and "phenomenological sociology" (Schutz, 1971).²

Five premises form the core structure of this theory of action. Human behavior is seen as:

1. "Perspectival": objects take on the meanings people attribute to them.
2. "Reflective": people can think - define, interpret, anticipate, plan, assess.
3. "Negotiable": people influence one another; human behavior is not reducible to individual qualities.
4. "Relational": people develop bonds with one another; interaction assumes selective and temporal dimensions.
5. "Processual": behavior has an emergent, ongoing quality.

These premises have fundamental implications for a methodology for the study of human behavior. First and foremost, they draw our attention to the desirability of studying action as it is experienced and formulated by the participants. Instead of asking "why someone did this or that," or "what caused someone to do such and such," the emphasis is on the "ongoing construction or forging of action by the people involved." It is an approach which emphasizes the experiences people have in "doing behavior." It rec-

ognizes people's capacities for reflectivity or independent thought as well as the plurality of meanings people may attach to any object. Additionally, consideration is given to people's abilities to influence or negotiate with one another, and to the bonds or relationships people develop with one another and the implications of these bonds for people's actions. Thus, in contrast to many models in the social sciences which view human behavior as caused by internal or external forces acting upon individuals, the approach offered here envisions people as the reflective, interactive manufacturers of their experiences and outcomes.

This approach necessitates that we collect data sensitive to people's experiences as they go about their activities. In Herbert Blumer's terms, it requires that researchers achieve "intimate familiarity" with the worlds of those whom they study. Thus, rather than approach people with preconstructed questionnaires, research involves (a) first hand experiences in the setting (b) extensive, open-ended interviews, and (c) extended observations. The objective is to obtain as much depth as possible regarding people's definitions of situations, their dilemmas and other assessments, the ways in which they take themselves and others into account in formulating their actions, and the ways in which they co-ordinate their activities with others. These concerns are situated within a background of process. Ergo, attention is given to the sequencing or unfolding nature of activities.

Some may ask if this approach is "empirical," particularly when practitioners discourage newcomers from concentrating on quantification or from relying on observations void of participant meanings. Yes, it is empirical, assuming that by empirical one means studying some phenomenon in a manner that attempts to be true to its "essence." To elaborate. It is first important not to confuse quantification with empiricism. Quantification is a method of processing observations. It is a (symbolic) means of drawing inferences about some phenomenon. It assumes that the objects of study are amenable to measurement and the measurements taken are viable representations of the phenomenon under study. This is not to denigrate quantification as a technique. While ultimately dependent on the quality of the data collected, quantification may offer certain advantages when dealing with physical (nonthinking) entities. However, people present new demands.

Unless one is prepared to argue that there are no significant differences between humans and other physical objects, then it is not at all apparent that a methodology appropriate to other physical objects has validity when applied to human behavior. Insofar as we limit the study of humans to elements over which they exercise no thought, the methods we have devised for studying other nonthinking entities may be appropriate. We may treat them as billiard balls, robots, carcasses, and the life. But any human activity which entails interpretation on the part of humans threatens to invalidate the assumptions on which the physical (object) sciences are based. The matter becomes further complicated when interpretation is recognized not only as an individual capacity, but as a process both grounded in input from others (they provide us with perspectives, frames of reference, or orientational frames), and amenable to change as a result of people's ongoing interactions and their reflections on those exchanges. We need a "science of human behavior" which is sensitive to the perspectival, reflective, negotiable, relational, and processual nature of group life. Indeed, one may well ask if any approach to the study of human behavior which violates these basic features of group life ought to be called scientific?

¹I would like to thank Augie Fleras for his thoughtful reading of an earlier draft of this paper.

²As a tradition, symbolic interaction not only constitutes a background theme for many of these developments, but its practitioners have absorbed and incorporated a great many of the conceptual emphases or refinements each of these strands of "interpretative sociology" entails.

Generic Social Processes

Generic social processes refer to the forms or dynamic features of association that transcend the content or substantive features of group life.³ Thus, one may envision "promotion" or "negotiation" as instances of generic processes, while the items being promoted or bargained for denote the content mediated through these social forms. Organizing the study of human behavior around these processes, the task is to develop a conceptual scheme applicable to any group, any time, anywhere. Consequently too, any and all realms of group life represent zones for developing, assessing, and refining the processes entailed herein.

The idea for the concerted study of generic or basic social processes developed somewhat gradually and unevenly. It reflects a series of loosely connected studies, each of which sought to achieve intimate familiarity with people involved in particular settings (e.g. juvenile delinquency [Shaw, 1931]; taxi-dance halls [Cressey, 1932]; theft [Sutherland, 1937]; mental patients [Goffman, 1961]; and marijuana users [Becker, 1963]). While concentrating primarily on explaining the life-world experiences of people involved in these settings, it was becoming increasingly apparent that people participating in rather diverse (content-wise) occupational and recreational settings were engaged in strikingly parallel activities.

Individual processes might evidence themselves more or less prominently or sharply in some settings rather than others, but much could be gained by examining parallel processes across settings. As these studies accumulated, the issues subsequently became ones of (a) uncovering central processes in each context and (b) comparing these with those reported in other settings. However, the development of a generic processual theory of action has been much slower than might have been anticipated.

In part, the gathering of ethnographic data is a slow, demanding process. A concern with achieving careful, detailed, comprehensive analyses of particular settings prevents individual researchers from doing as many comparative studies as would be desired. Additionally, concerns with acquiring expertise in particular substantive realms tends to divert scholars from making more concerted cross-setting analyses. Finally, insofar as the processes around which comparisons may be made are themselves undergoing conceptual refinement, some unevenness among existing studies is inevitable. This, along with the variable attention researchers have given to particular processes in each research site makes direct comparisons more tentative as well as more challenging. Yet, only by drawing comparisons across contexts can we begin to isolate core processes, delineate their variations, and develop other refinements as are suggested by the data. It will be a slow, cumulative enterprise, but only in this way will we achieve a theory of action which builds firmly on actual human experience.

Substantive Specialties: Only Testing Grounds?

At first glance, this concern with generic social process may appear somewhat disconcerting to those with strong interests in particular content areas. Substantive areas such as consumer behavior and marketing appear to assume secondary significance in the quest for generic social processes. But substantive specialists would be greatly shortchanged were they to stop at this point. First, the

quest for generic social processes does not exclude any substantive area. To the contrary, it encourages process-oriented inquiries in both novel and established fields. Secondly, concerned with analyses which reflect intimate familiarity with the settings at hand, researchers working in this tradition particularly welcome research which displays the sort of fine-grained detail serious practitioners are more able to achieve. Third, and no less importantly for those with strong interests in particular fields are the gains available through conceptual cross-fertilization. A process-oriented approach provides researchers in any setting with concepts acquired (and lessons learned) from parallel research inquiries in other settings. Fourth, and in reflection of this latter notion, this approach directly fosters awareness of the findings and conceptual refinements emerging within any given setting (e.g. consumer behavior) among researchers in other substantive settings (e.g. deviance, religion, politics).

Each setting does represent a testing ground, at least insofar as the researcher involved wishes to make a contribution to the overall understanding of generic social processes. However, even for those with singular concentrations on particular specialities or subfields, one may ask, "Is there a better way of achieving a full understanding of a field of human behavior than by examining the ways in which people go about doing the activities that constitute that realm of enterprise?" As Goffman (1967:149-270) posits, the study of social process takes us "where the action is!"

Towards a Basic Set of Generic Processes

Given this relatively recent concern with generic processes, it should not be surprising to find that considerable ambiguity exists with regards to (a) the individual processes worthy of attention and (b) the levels of abstraction each of these processes represents. What follows is one attempt to come to terms with these problems and to suggest some lines for future research and conceptual development.

The material following very much represents an overview of mainstream interactionist/interpretative sociology. However, these notions have been cast more explicitly in process terms (the "doing of group life"). This listing does not begin to deal with processes in the sort of detail we require for an adequate understanding of the concepts referenced within, but may have some value as an orientational statement.

The four processes following not only signify key elements of people's involvements in situations, but also define the essence of group life. These processes are interdependent and need to be viewed holistically if we are to develop a fuller appreciation of each. Nevertheless, each process encompasses several (sub)processes within, and on these levels each is amenable to empirical inquiry. Unfortunately, space precludes even cursory illustrations of the applicability of these concepts to the marketplace.

1. Acquiring Perspectives. Representing interpretative frameworks or viewpoints for making sense of the world, perspectives provide the substantive content for association. Definitions of "fads" and "fashions" are encompassed by the concept of perspective as are traditions, notions of rationality, and political and religious beliefs, as well as language and other symbols. Although the impact of any perspective (or elements thereof) is ultimately moderated by the actors involved (via acknowledgement, interpretation, formation of action), we can ask how consumers and others contend with the cultural content they encounter:

- +Receiving Definitions of Objects from Other People
- +Developing Images of objects (including images of other people and of oneself)
- +Learning (cultural) Patterns of Objects (e.g. fashion)
- +Encountering Inconsistencies Within and Across Perspectives
- +Applying Perspectives to the "cases at hand"
- +Resolving Dilemmas (sorting out paradigms)

³These notions have their origins in the works of Simmel (1950); especially his distinction between "forms of association" and content, as well as in the tradition of the Chicago school of symbolic interaction (most centrally, Mead, 1934; Blumer, 1969) and in phenomenological sociology (especially, Berger and Luckmann, 1966; Garfinkel, 1967, and Schutz, 1971). More recently, the quest for generic social processes has been made explicit in the works of Glaser and Strauss (1967), Strauss (1970), Lofland (1970, 1976), Lester and Hadden (1980), Bigus, Hadden, and Glaser (1982), Couch (1984), and Prus (1985a).

- +Improvising on Existing Perspectives
- +Promoting (and defending) Perspectives to Others

2. Achieving Identity. "Identity work" is contingent on people's capacity for "self reflectivity;" it requires that one be an object unto oneself. Reflecting the perspectives one has on the world, identities are not only situated within those realities, but also are influenced by the ongoing shifts in perspectives that people normally undergo over time and across situations. However, in contrast to the more generalized quality of perspectives, identities have a more immediate and personalized ("you and I") focus. Additionally, to the extent people associate identities with the treatment they receive, they tend to be concerned about maintaining acceptable images (especially avoiding disrespectability).

As products of interaction, people's identities are also fundamentally linked to the identities of their associates. Consequently, identity work reflects ongoing assessments and negotiations as the parties involved jointly endeavor to work out self and other definitions. Like people in other settings, consumers (and vendors) tend to be concerned about the identities they acquire. The processes entailed here include:

- +Encountering Definitions of Self from Others
- +Attributing Qualities to Self (self definitions)
- +Comparing Incoming and Self-Assigned Definitions of Self
- +Resisting Unwanted Identity Imputations
- +Selectively Conveying Information About Self to Others
- +Cleaning Information About Others
- +Assigning Identities to Others
- +Promoting Specific Definitions of Others
- +Encountering Resistance from Others
- +Reassessing Identities Imputed to Others

3. Doing Activity. Although people's activities have important implications for their subsequent viewpoints and identities, activities acquire their meaning or purposiveness relative to both the perspectives from which they are envisioned and the identities of the people involved. Since the preceding discussions of perspectives and identities have already been cast in action ("do-ing") terms, our attention turns to four other realms of activity. These include (A) getting involved in activities, (B) performing activities, (C) pursuing cooperation from others, and (D) making commitments.

(A) "Getting Involved" refers to the sequencing of people's participation in settings. Emphasizing the "how" (vs. why) of involvements, consideration is given to the histories or ("careers") of people's participation in particular situations (see Prus, 1983b for more detail). Four processes are prominent here:

- +Getting Started (initial involvements)
- +Sustaining and Intensifying Involvements
- +Becoming Disinvolved
- +Becoming Reinvolved in Situations

(B) The "performance of activity" assumes the processes outlined in "getting involved," but highlights the "problematics of accomplishment." The processes of relevance to performance (e.g. "shopping as performance") include:

- +Making (preliminary) Plans
- +Getting Prepared
- +Managing Stage Fright (reservations, if any)
- +Developing Competence (knowledge, tactics, applications)
- +Dealing with Obstacles, Resistances, Distractions
- +Conveying Images of Competence (ability, composure)
- +Encountering Competition
- +Making Ongoing Assessments and Adjustments

(C) While the "pursuit of cooperation" may be subsumed by the concept of performance, it emphasizes "persuasion processes." Persuasion reflects attempts on the part of people to "gain the cooperation of others" in respect to both "one to one" and "group" situations. When dealing with groups of people, matters of complexity and ambiguity typically become more noteworthy, as do the greater likelihood of distractions, challenges, and lowered levels of personal accountability. This may involve some additional

frustration and result in the creation of some unique group-directed tactics, but otherwise the same basic processes appear to hold for these instances as well. Regardless of whether we focus on buyers or vendors, we may consider how people go about:

- +Formulating (preliminary) Plans
- +Role-Taking (inferring/uncovering the perspectives of the other)
- +Promoting Interest in One's Objectives
- +Generating Trust
- +Proposing Specific Lines of Action
- +Encountering Resistance
- +Neutralizing Obstacles
- +Seeking and Making Concessions
- +Confirming Agreements
- +Assessing "Failures" and Recasting Plans

(D) "Commitments" assume a variety of forms and may include physical investments as well as claims made to oneself or others. Some commitments are clearly desired by the parties making them, but others may be exceedingly tentative or reflect earlier resistance. The processes of "putting your money down" or "buying into" particular situations have particular consequence for subsequent behavior. To the extent people acknowledge earlier made commitments, these can significantly effect their choices (i.e. closure). Subprocesses of relevance to consumers (and others) include:

- +Assessing Options
- +Dealing with (any) Earlier Commitments
- +Avoiding Commitments ("elusive targets")
- +Minimizing or Diversifying Investments ("hedging bets")
- +Organizing Routines around Particular Activities
- +Neglecting Other Options ("closure by default")

4. Experiencing Relationships. Like the elements preceding, relationships may be largely subsumed by the "doing of activities." However, the selectivity and continuity of association entailed by "bonding" signifies a vital element in social life. Relationships imply perspectives, identities, and commitments, and they can be powerful elements shaping the choices that consumers and others make. Like other activities, relationships reflect process (initial involvements, continuities, disinvolvements, reinvolvements), but matters of "intimacy and distancing" become especially prominent here as people try to achieve levels of selectivity and continuity with which they feel comfortable:

- +Getting Prepared for Generalized Encounters
- +Defining Self as Available for Association
- +Defining (specific) Others as Acceptable/Desirable Associates
- +Making Approaches/Receiving Openings from Others
- +Encountering (and indicating) Rejection/Acceptance
- +Assessing Self and Other for "goodness of fit"
- +Developing Interactional Styles (in each relationship)
- +Managing Openness and Secrecy
- +Developing Understandings, Preferences, Loyalty
- +Managing Distractions (and outside commitments)
- +Juggling (multiple) Relationships
- +Severing Relationships (disentanglement)
- +Renewing Relationships

Marketplace Applications

While the theory of action proposed here has its roots in a variety of settings outside the marketplace, there seems little question of the applicability of generic processes to the study of consumer and vendor behavior. Representing a setting in which people are invoking perspectives, engaging in (buying and selling) activity, developing identities, making commitments, and experiencing relationships, the marketplace denotes a most viable setting in which to explore, assess and refine these very notions. Additionally, this paradigm offers the advantages of explicitly acknowledging long-term as well as short-run interlinkages of buyer and seller roles. To date, however, we have seen few forays of an ethnographic nature into the marketplace. Despite its centrality for urban sociology, social scientists have largely ignored the marketplace. And, those in marketing have generally neglected the P's

of "people and process" (Prus and Frisby, 1986).

Instances of ethnographic research which directly focus on consumer behavior are exceedingly limited. Hence, while Sanders (1985) specifically focuses on the purchasing of tattoos, the other materials closest to consumer involvements attend to people engaged in marijuana use (Becker, 1963) and drinking activity (Prus, 1983a). A general model for the study of people's involvement in the marketplace was also introduced to the literature by Prus (1983b). This model outlines the contingencies affecting people's (a) initial involvements, (b) continuities, (c) disinvolvements and (d) reinvolvements with regards to particular brands, products, and suppliers. It is apparent that we have much to learn about consumer involvements in the marketplace. For instance, we know very little about: how prospective buyers assess shopping advice from friends; how they approach or distance themselves from vendors; how they define price, quality and service; when they are more likely to trust vendors; or when they are more apt to become repeat customers. The emphasis should be on "shopping as activity." Attending to process, we need to be mindful of the perspectives with which shoppers approach purchasing contexts, their definitions and assessments of shopping contexts, the negotiation practices in which they engage, and the sorts of bonds they develop with the salespeople they encounter. Since consumer involvements are more adequately understood with respect to the inputs of those with whom they do business, it is also important for those interested in consumer behavior to attend to vendor roles. While also much neglected, somewhat more ethnographic work has been done in this direction. Noteworthy in this regard is work on automobile sales (Miller, 1964; Brown, 1973); the entertainment industry (Cressey, 1932; Prus and Irini, 1980); party plans (Peven, 1968; Prus and Frisby, 1984); and vendor activities (Bigus, 1972; Wallendorf, 1978; Prus, 1984, 1985b, 1986, tba; Pinch and Clark, 1986).

Conclusion

The earlier list of generic processes can be of considerable value in alerting researchers to many of the activities operative with respect to both buyer and seller roles. However, this represents only a rudimentary starting point. It is not a simple matter of "filling in the blanks" with marketplace referents. In addition to a careful, thorough scrutinization of people's experiences with regards to each process, it is recommended that researchers be prepared to scan the literature in pursuit of materials (regardless of context!) which address processes parallel to those being investigated. Not only will this provide much conceptual stimulation for research, but it will also establish an invaluable base for cross-context comparisons (and the cumulative sharpening of a theory of action).

Although the issue of methodological technique is worthy of much attention in its own, those embarking on interactionist research should be prepared to encounter much variety, complexity, and ambiguity as they allow those they study to explain their experiences in detail. Rather than generating highly distillable findings, ethnographic research has an expansive quality and an openness that those attempting to reduce human behavior to "nice, neat little boxes" are apt to find disconcerting.

Some readers will be disappointed in that no "quick-fix" solutions are offered to the study of consumer behavior. The implications are quite the opposite. While researchers in any realm may gain greatly by tapping into generic social processes (and the literature around which these processes have been developed), it is apparent that much work remains both within the field of marketplace behavior and with regards to the development and refinement of the theory of action introduced herein.

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Abstract

Following a brief critique of the positivist orientation and method, this paper presents an alternative perspective (symbolic interactionism) and research approach (participant observation). The conclusion focuses on some issues of interest to consumer researchers which are most effectively investigated using this alternative orientation and methodology.

Introduction

Consumer researchers operate in a professional culture dominated by the related ideological perspectives of realism, determinism and positivism. From this standpoint the "world" to be understood exists apart from the cognition of social actors; human behavior is controlled by objective situations, environmental features or psychological forces; and explanations of inherently orderly, law-governed workings of reality may be derived through the systematic search for regularities and causal relationships. Logical empiricism is the procedure which typically guides the consumer researcher's rational discovery of the laws which determine behavior. An a priori model is logically constructed from the analyst's theoretically informed understanding of reality. This model is used to generate hypotheses which are then subjected to empirical tests. The data are employed to support, disconfirm or restructure the hypotheses and their contextual model. Explanatory understanding of the laws which determine the workings of behavioral reality provides the foundation for the prediction and manipulation of human behavior.

The belief that social reality, like obdurate physical reality, consists of an objective order apart from the understanding and social activity of human actors underlies social scientists' use of methodologies akin to those employed by physical scientists. "Scientific" research, from this perspective, is a value-free researcher's investigation of a world reduced to a collection of discrete, measurable variables which he/she quantifies and manipulates in order to expose causal relationships. The more precise the quantification, the closer the analyst comes to identifying the objective structure underlying the observable world (Hirschman 1985, p. 228).

The allegiance to the positivist/realist/determinist perspective and associated research approaches repeatedly encountered in consumer research is eminently understandable given the desire for legitimacy felt by those who identify with and are active within this rising area of specialized interest. New disciplines or subdisciplines--especially those with an applied rather than a "pure science" focus--tend to mimic the models and approaches employed within established fields of study. Within the political structure of academia marginal specialties are more likely to be consensually defined as legitimate and receive resources when symbolically identifiable as serious, scientific and conventionally empirical. In this regard, the use of traditional perspectives and research approaches functions to legitimate consumer research and to enhance the prestige of its practitioners within the eyes of both the members of the academic community and the marketing managers who are the primary consumers of the practical services which they offer (Uusitalo and Uusitalo 1981, p. 560; Hudson and Murray 1986, p. 345; Anderson 1983; Young 1981, p. 121).

Emile Durkheim (1938), the key historical advocate of a positivist/functionalist approach within sociology, maintained that social scientists should employ the methodologies of the physical sciences to study "social facts."

Social facts are, from the Durkheimian perspective, variables characterized by their existence apart from the subjective experience of individual actors but which constrain behavior. Since these social variables are as "real" as the variables studied by physical scientists, Durkheim advocated the use of the positivist perspective and the scientific method to discover the cause of a social phenomenon and its social function. However, a considerable body of social scientific literature questions the utility of the normal science model in the study of human behavior. Max Weber (1949) and others (Dilthey 1936; Schutz 1954) have emphasized the unique differences between the subject matter of the physical sciences and that of the social sciences. For Weber, the subject matter of the social sciences did not consist of objective and concrete social facts. Instead, he directed social analysts to focus on "social action"--behavior which is subjectively meaningful to human actors. Weber maintained that understanding social behavior necessitated the utilization of a unique empirical approach. Through the use of "verstehen," empathic involvement with the subjective system of meanings which orients and grounds actors' behavior, social scientists could acquire an understanding of those activities (see Bruyn 1966, pp. 1-9; Collins 1975 and Rabinow and Sullivan 1979 for discussions of this critical sociological debate).

Various critics of the logical empiricist approach to social knowledge (eg., Blumer 1969, pp. 127-139; Deutscher 1973, pp. 244-246, 254-259) have maintained that the search for causally related, discrete, measurable variables entails an unrealistic and fruitless reductionism. Variable analysis as typically pursued by positivist social scientists is appropriate in only a few, limited areas of social life--those which are routinely constructed and highly stable. Further, the variables identified by objective social scientists have little explanatory utility because "it is not the variable as objectively defined by the scientist which exerts influence on the action; to the contrary, it is the actor's interpretation of what that variable means which is related to his action" (Deutscher 1973, p. 255).

In turn, the traditional positivist methods--especially, experimentation and survey research--are the focus of considerable criticism. Experimental methods are viewed as generating findings with little external validity. Experimentation, at best, provides a glimpse of how people behave in the artificial social psychological circumstance of the experimental situation (see Ginsberg 1978; Orne 1962; Friedman 1967).

Assessments of a consuming devotion to and a faith in the data derived from survey methodologies tend to focus on three perceived inadequacies. First, the categories and issues deemed a priori to be of import on the basis of the investigator's objective, theoretically driven understanding possess questionable utility. They typically have little relationship to the categories of meaning which social actors employ to orient their behavior within the processual flow of their lived experience.

Second, surveys reveal attitudes rather than actual behavior. A sizable body of research and discussion is devoted to questioning the assumption of a direct correlation between these two key phenomena (e.g., LaPiere 1934; Kutner, et al. 1952; Fishbein and Ajzen 1972; Freeman and Ataov 1960).

The third major criticism of the survey approach focuses on the practical and data-problem generating issue of how survey research is organized. Since it is typically a large-scale and bureaucratized data collection process, the on-the-line work of survey administration is rarely

carried out by those who designed the study, will analyze the data, will gain occupational prestige because of the study or who have a stake in the cumulative advance of scientific knowledge. The actual work of survey data collection is done by "hired hands" (Roth 1965). As is typical for workers engaged in tedious and alienated labor, survey data collectors take shortcuts designed to ease and speed their occupational activity. Consequently, they cheat, guess, cut corners, alter wording, avoid asking "stupid" questions and otherwise threaten the sacred reliability of the research endeavor (see Schwartz and Jacobs 1979, pp. 133-142 for a striking illustration of the hired-hand problem in marketing research).

Founding an understanding of social behavior on the quantitative data commonly derived from the use of these research approaches is also questioned in the critical literature. T. R. Young (1981) observes that quantification involves an unrealistic simplification. If social scientists are intent upon understanding human behavior, quantification is yet another step in a process which removes the analyst from contact with the phenomenon she/he wishes to understand.

One should realize that quantification is a process by which the richness of everyday life is made progressively more barren as it proceeds. One discards information (variety) as human behavior is translated into word sets. Still more information is discarded as one transfers data from word sets into number sets--a number set simply is not as informative as a word set since word sets are not limited by the constraints on number sets--ordinality, inter-vality, and ratio-nality. One loses still more information as one converts descriptive parameters into summary statistics. Quantification, then, is a process by which information is systematically discarded (p. 123).

The discussion which follows builds upon exhortations to enlarge the view and scope of consumer research. I will outline briefly symbolic interactionism, the dominant subjectivist/interpretive theoretical perspective within contemporary sociology. In turn, I will present the ethnographic method which is typically favored by symbolic interactionists. Finally, I will discuss areas of consumer behavior and features of commercial interaction which can be fruitfully focused upon through the lens provided by this alternative perspective and methodology.

The Symbolic Interactionist Perspective

Given the oft-cited problems with the importation of the positivist/determinist/quantitativist perspective traditionally popular in the natural sciences into the very different activities involved in developing a disciplined understanding of human behavior, a growing number of consumer researchers are advocating and employing alternative perspectives and methods. Various authors advocate increased usage of a nominalist/voluntarist perspective (e.g., Uusitalo and Uusitalo 1981; Hudson and Murray 1986), increased attention to sociological (rather than psychological) features (e.g., Foxall 1974; Sofer 1965; Nicosia and Mayer 1976), intensified focus on the subjective factors shaping behavior (e.g., Hirschman 1984; Hudson and Murray 1986) and utilization of qualitative research approaches (e.g., Sherry 1983; Wells and Lo Sciuto 1966).

Symbolic interactionism stresses the centrality of the actor's subjective evaluations of his/her social and structural environment in the more-or-less voluntaristic everyday activity of constructing plans of action and choosing how to behave. Social action is premised on how participants subjectively define situations rather than on the basis of objectively measurable features, (cf., Belk 1975; Kakkar and Lutz 1981; Foxall 1983 pp. 62-67). Social structure (culture, stratification, action systems and so on) is not unimportant, but it is not the

determinant of human action. Instead, features of social organization provide a framework inside of which human beings make choices in that social organization shapes the immediate situation (as it is understood by actors) in which activities occur (Blumer 1969, pp. 87-88).

The central component in the process of social interaction is the human actor constructing his/her behavior within a situational context. Interaction entails the basic process of defining the situation and attempting to build an understanding of how co-interactants, in turn, define the situation. An actor's interpretation of the meaning of a situation ("What's going on here?") and understanding of how others perceive it facilitates "collective action" (i.e., coordinated social action involving the complex fitting together of the goals and situational definitions of the various actors) (see Becker 1974; Blumer 1969; Manis and Meltzer 1972).

Complex social interaction is possible because of human actors' symbolizing abilities. From the interactionist standpoint, the world of social behavior is essentially symbolic--we move in a social environment composed of multiple levels of meaning. Nonverbal and verbal symbolization cues co-interactants about the (potentially diverse) understandings actors carry, thereby rendering collective action possible.

Interactionism's focus on subjective meaning as the central factor shaping behavior is not reductionist solipsism. Members of social groups--from dyads to societies--share definitions of reality and common understandings about situationally appropriate behavior. These shared understandings constitute culture (see Geertz 1973). Roles and norms are key components of culture. Both consist of conventional knowledge regarding appropriate behavior given the situational circumstances and the relative status of the interactants within the specific situation.

The "dramaturgical perspective"--a variant of interactionism--employs a theatrical analogy. It presents interaction as a play in which interactants act out roles, use "costumes," manipulate aspects of the "set," employ "props" and so forth in order to shape the "definition of the situation" they communicate to their fellow interactants. By manipulating these definitions social actors attempt to influence the behavior of those with whom they interact (Goffman 1959; Prus 1983).

The "production of culture perspective" is a recent focus of emphasis for interactionists who share interests with consumer researchers. This perspective looks at the social process whereby material goods (especially, art, popular culture materials and other "expressive" products) and services are conceived, created, evaluated, distributed and consumed (see Becker 1974; Peterson 1976; Sanders 1982; Hirschman 1981; Hirschman and Stampfl 1980).

Participant Observation: Sociological Ethnography

When an actor's subjective definitions are central to the process whereby he/she chooses behavior and these definitions arise in the context of group interaction and situational experience, a disciplined understanding of behavior can best be achieved by tapping into cultural meanings as they are used in the immediate interaction situation. Participant observation is the predominant method employed by interactionists to achieve this goal. As Becker and Geer (1957, p. 28) observe:

The most complete form of the sociological datum, after all, is the form in which the participant observer gathers it; an observation of some social event, the events which precede and follow it, and explanations of its meaning by participants and spectators, before, during, and after its occurrence. Such a datum gives us more information about the event under study than data gathered by any other sociological method. Participant observation can thus

provide us with a yardstick against which to measure the completeness of data gathered in other ways (emphasis added).

The participant observer's primary goal is to become a well-socialized member of the social group in which he/she is interested. As an ongoing participant in the everyday interaction situations surrounding behavior the researcher acquires a direct empirical understanding of the complex meaning system actors use to orient their actions. The "thick description" (Geertz 1973) provided by this ethnographic approach is superior to data derived through the use of other techniques. Systematic, non-participant observation offers information about what people do in immediate social situations but not why they do it (cf., Wells and Lo Sciuto 1966). Nonsituated interviewing elicits information about attitudes rather than actual behavior and is subject to demand characteristics and similar problems of reactivity. Participant observation, in contrast, allows direct experience of the meaning system used by social actors and decreases reactivity problems. The researcher contacts social behavior in the natural setting. Actors have more things to worry about (getting the job done, maintaining one's reputation in the eyes of peers, finishing the grocery shopping, and so on) than impressing the researcher or figuring out his/her intentions. In addition, participant observation allows the researcher to check what people say they do or would do (attitudes) against what they actually do in the immediate situation.

The data collection process of participant observation involves the researcher's: 1) identifying a group and an interaction setting of interest; 2) gaining access to the setting; 3) acquiring a basic understanding of the setting and the interaction within it during an initial reconnoitering phase, and; 4) generating a large body of "field notes" which systematically and completely describe the setting, the actors, interactions and relationships. Field interviewing--semi-focused conversations with actors in the course of their everyday activities--is also carried out and provides much of the material contained in the field notes.

Participant observation is typically (though not necessarily) an inductive process. Abstracted, theoretically meaningful analyses are drawn from the patterns observed in the ongoing flow of events in the field. Data collection and analysis proceed in tandem as the researcher develops informed hunches, checks these ideas out with actors in the field, seeks "negative cases" and revises and refines the hunches into more general statements of relationship (hypotheses). Commonly, the participant observer uses this grounded understanding to structure the content of a series of semi-structured interviews with selected interactants late in the career of the field work. (For detailed presentations of this method see Lofland and Lofland 1984; Lofland 1976; McCall and Simmons 1969; Shaffir, et al. 1980; and Bruyn 1966. Systematic accounts of the analysis of qualitative data will be found in these volumes and in Glaser and Strauss 1967; Glaser 1978; Miles and Huberman 1984; Denzin 1978, pp. 191-201 and Robinson 1951.)

Participant observation is a research technique which is not suited for all issues nor all investigators. Complex, large scale social systems and phenomena are difficult (though, not impossible) to study when an individual researcher employs this approach. The research process is tedious, time-consuming and occasionally dangerous. It is not an activity which is best pursued by social scientists who experience discomfort with ambiguity, with being a stranger rather than exercising authority and who do not possess significant interpersonal skills. Conversely, it is the best method for gaining information about how social actors organize their behavior in the face of immediate situational contingencies and meaning contexts. It is also a research activity which is relatively inexpensive, can be pursued independent of the constraints commonly imposed by bureaucratic funding agencies and

research organizations and the research process itself is a consistent source of intrinsic pleasure and excitement (cf., Hirschman 1985, pp. 232-237). The method is useful both as the sole approach to data collection and, as a number of writers have advocated, as a technique which can be employed to guide other, more traditionally structured methods and fill in the gaps in understanding left by the more conventional research approaches (see Sieber 1973; Sherry 1983, pp. 165-167; Denzin 1978, pp. 191-307).

Conclusion

The proceeding has been a brief presentation of a theoretical perspective and a related methodological approach which offer consumer researchers alternatives to the positivist, normal science model and quantitatively oriented methods which have dominated the field. The strength of the phenomenological orientation lies in its attention to the subjectively held, but socially shared, meaning structures which underlie behavior. The described approach is particularly appropriate for those interested in understanding consumption as a form of social behavior. The interactionist perspective directs attention to the collective action features of consumption--buyer/seller interaction is portrayed as a process in which interactants are involved in ongoing attempts to define the "other" (Prus 1984, 1986; Memnerick 1974) and the situation. In turn, these definitions are manipulated by the interactants in order to exercise control within the purchase situation. Symbolic interactionism also emphasizes the central importance of the actor's definition of "self" and the significance of consumer products as symbolic objects which reinforce or aid in the transformation of one's understanding of who they are and how they present themselves to others (see Levy 1959; Solomon 1983).

Participant observation is particularly suited for the investigation of certain issues and interaction situations of relevance to consumer researchers. Shopping activities and service interaction, both conventional (e.g., Bertoia 1986; Bigus 1972) and "deviant" (e.g., Adler 1985; Sanders 1985, 1986), are especially appropriate areas in which the ethnographic approach can be used to advantage.

The activity of consumption, especially the consumption of products and services which provide the consumer with aesthetic/emotional experience (Hirschman 1984; Hudson and Murray 1986; Hirschman and Holbrook 1982; Sanders 1974), is another basic area which may be most effectively explored using qualitative methods founded on direct researcher involvement (see Klein 1983; Lewin 1986).

The interactionist perspective emphasizes the key importance of personal networks and reference groups as providing and supporting the meaning construct which underlies an individual's behavior. Interactionist methodology is eminently suited for exploring subcultures--the social segments (e.g., ethnic, adolescent) which, in part, supply the consumer with his/her definitions of products and shape the ways in which products are chosen, valued and utilized (Hirschman and Holbrook 1982, p. 99; Uusitalo and Uusitalo 1981, p. 561).

Prompted by a growing dissatisfaction with the ability of traditional models and empirical procedures to provide an adequate understanding of human behavior, subjectivist perspectives and qualitatively focused, interpretive methods are reasserting themselves within a variety of social scientific disciplines (see Sass 1986 and Hirschman 1985). The alternative perspective and method presented in this paper hold special promise for consumer researchers who wish to escape the constraints of traditional approaches. Although participant observation raises some unique ethical issues (Hirschman 1986, pp. 247-248), it holds the promise of avoiding the ethical problems inherent in the typical ways in which knowledge of consumer behavior has been utilized in the past. Rather than providing marketing managers with information which they can use to more effectively manipulate consumers, the interpretive/ethnographic approach can (and

should be) used as a source of humanizing and liberating knowledge. Founded on an understanding of human behavior as rational (i.e., premised on a choice of practical alternatives as they are subjectively perceived and evaluated) and creative, the qualitative exploration of consumption holds the potential of expanding the knowledge and supporting the interests of consumers and researchers alike (Holbrook 1985; Comstock 1980).

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PROSPECTS FOR CONSUMER RESEARCH

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Abstract

This paper provides an "outsider's" view of consumer research and argues that the dominant paradigm of positivism and the concern with objectivity denies or obscures the social or subjective nature of research and consumer behaviour. A qualitative approach to the study of consumer behaviour is advocated and the intimately related theory of symbolic-interactionism and field research methods are described as ways of understanding consumer behaviour in a subjective or social, inductive and holistic way.

Introduction

In approaching this topic I bring an orientation as a qualitative sociologist and my experiences as a consumer. Beyond that, I have perused several texts and journals in the marketing and consumer behaviour field. Although in some eyes this may disqualify me as a potential contributor; for others, my very naivete and strangeness to the "discipline" provides me a certain "objectivity." Ideally, the "taken for granted" of the discipline under study are more visible to the outsider like myself who, like the anthropologist studying a foreign culture, has not been socialized into this "different" way of understanding life.

One immediate perception is that, in fact, things are not so much different in consumer research. Although the "applied" orientation is an unfamiliar emphasis, immediately raising questions and doubts about the relevance of such acadamese to the practitioner; the field suffers or enjoys the same "scientific" development as other social sciences. The research, at some cost, is clearly dominated by the logical empiricist paradigm stressing rationality, objectivity and measurement.

Long ago I learned that practitioners of any approach of science are often strongly, sometimes hostilely, resistant to the idea that other methods, perspectives or paradigms might fruitfully contribute to their pursuit of knowledge.

Paradigms in power become particularly defensive and monopolistic. Professions and their specialities are often deliberately obscure and esoteric as they seek to cloak their "business" in an aura of competence in their search for scientific legitimacy. Professional journals effectively reflect the control of the positivists in social science and consumer and marketing research as part of the "cloak of competence" (Haas and Shaffir, 1977) of professionalization. "Objectivity" is the code word of this ideology as the social nature of human activities like science is either denied, overlooked or obscured. The reality that paradigms are social constructions reflecting the values and interests of dominant researchers and elite interests is often hidden. The consensual and conservative nature of legitimated science and the social fact that theories and findings are appraised on scientific criteria as well as class and professional interests and dominance goes unappreciated. We deny the very reality we attribute to other relationships and institutions of society. Somehow, our ritual baths in scientific rhetoric purify us from the contamination of subjectivity and vested interests.

Appreciating the idea that science is a social activity requires a certain reflexivity, a recognition that we affect and are affected by the research process. Rarely, however, do we provide self-conscious reports of the process of research, relying instead on objectivist accounts of the scientific nature of our procedures. The detached observer becomes the ideal, based on the presumption that such an alienation is both possible and desirable.

And so, I would argue that the prospects for consumer research are self-limited by the vested interests of persons

trained and believing in specific ways of doing things, who do what they specialize in well, but who gain only a very partial and fragmented picture of reality because of the limits of an objectivist approach.

On the other hand, these prospects, I argue, would be immeasurably enhanced by an acceptance of a more relativistic, contextual approach to consumer research. Instead of, or in combination with, the positivist approach to consumer research, this paper advocates the necessity of research empathy and intimacy to acquire understanding of consumer behaviour. The call to examine consumer behaviour as process is recognized by a very few researchers in the field. A respected contributor to consumer research, Jacob Jacoby, describes the problem I've noted and calls for an approach emphasizing the processual when he argues that consumer researchers should:

devote less time to studying what people say they do and spend more time examining what it is that they do do.... We also need to begin studying consumer behavior in terms of the dynamic process it is ... probably 99 + % of all consumer research conducted to date examines consumer behavior via static methods administered either before or after the fact (1978:90).

Peter similarly argues that:

we clearly need to know what behaviors people perform before we explain why they perform them. Not only has little study been devoted to overt behavior but little attention has been given to delineating the basic sequence of behaviors people must perform to purchase a product or other sequence of behavior of interest in marketing (1981: 144).

More recently, other researchers have challenged the heavy reliance upon self-report techniques and fixed-format surveys designed for computer-analytic processing, arguing for a relativist, contextual approach to research stressing the subjective, phenomenological, holistic aspects of events and behaviour, and the necessity of research empathy and intimacy in order to acquire understanding (Deshpande, 1983; Hirschman, 1985; Peter and Olsen, 1983).

This paper reinforces the call for a more subjective, inductive and holistic approach to the study of consumer behavior. The paper attempts to provide some conceptual and methodological direction for understanding and examining consumer behaviour as social processes requiring methodologies that emphasize observation, interaction and interpretation. I describe the social psychological perspective of symbolic-interactionism and its attendant qualitative technique of study as ways of inductively deriving understandings about consumer behaviour. I conclude by offering an example of qualitative techniques that might be considered for getting at the "social" and "process" nature of consumer behaviour.

Symbolic Interaction Theory

The investigation of consumer behaviour as social process involves the distinctive combination of symbolic-interaction theory and field study methodology. This combination of theory and method combines the social psychological contributions of George Herbert Mead, Charles Horton Cooley, John Dewey, and Everett C. Hughes,¹ among others,

¹See Charles Horton Cooley, Human Nature and the Social Order, (Glencoe, Ill.: Free Press, 1956); John Dewey, Human Nature and Conduct, (New York:Modern Library, 1930); George Herbert Mead, Mind, Self and Society, (Chicago: University of Chicago Press, 1934), and The Philosophy of the Act, (Chicago: University of Chicago Press, 1938);

with the methodology of field research, an anthropological approach introduced to the University of Chicago by Robert S. Park. Before directing the reader to the particular concepts which are used in this analysis, it is necessary to outline some general theoretical underpinnings which directly affect both the research and analysis.

A basic idea shared by symbolic interactionists is that the distinctive attributes of human behavior grow from man's immersion in a cultural environment which depends upon the existence of language behavior and the creation and manipulation of signs and symbols. Language is the vehicle by which culture is transmitted from generation to generation, and it is through language or symbolic behaviour that individuals are able to align their actions within a framework of mutual expectations. Communication through the use of symbols makes the formation of human groups possible and gives them continuity in time and space. The creation of symbols initiates and facilitates the evolution and transmission of traditions, skills, goals, tactics, rules and procedures.

Human behaviour is understood as the conscious and rational interpretation by individuals of these symbolic, as well as physical, stimuli in their environment. Individuals define and construct their social situations, and the basis for these interpretations are provided by sets of cultural meanings and understandings. In such interactions, individuals explain to one another what they ought, or are expected, to do. We make indications to one another, symbolically communicating a series of definitions and expectations, thus providing a framework for definition of the situation.

Humans, it is emphasized, live in a world of meanings and we respond to our world on the basis of the meanings. The meanings of objects, actions and situations are social products arising from the defining activities of individuals as they interact with one another. Human behaviour is a process in which individuals act toward and in response to various objects depending upon the culturally-derived meanings of those objects.

Individuals often guide and control their behaviour by considering what they believe to be the expectations of others. Their assessment of the situation includes an attempt to define the expectations of others. We are able to consider the expectations of others because of the uniquely human ability to take the role of the other.²

Individuals are able to understand others, because they are able to imagine how they feel and think. We do this by empathizing with others, by symbolically assuming their point of view. Because we are able to perceive social situations from others' viewpoints, we can anticipate and weigh their possible reactions to our behaviour. We can assay the situation from several viewpoints, consider several alternative lines of action, and act in ways we consider most appropriate or most likely successful.

This process of definition is continuous and dynamic. As we move through new situations we acquire new definitions. As our relationships with others change, so does our be-

(footnote continued)

¹Everett C. Hughes, Men and Their Work. For a summary of symbolic interaction theory see, Arnold M. Rose, ed., Human Behavior and Social Processes, (Boston, Massachusetts: Houghton Mifflin Co., 1962), particularly chapter 1 by Arnold M. Rose, "A Systematic Summary of Symbolic Interaction Theory," pp. 3-19. See also Jerome G. Manis and Bernard N. Meltzer, eds., Symbolic Interaction: A Reader in Social Psychology, (Boston: Allyn and Bacon, 1967).

²Anticipating the response of others to our behaviour is possible only by perceiving the other person's point of view. The ability to imaginatively enact the role of others is a precondition for the anticipation of the responses of others and for adequate perception of one's self (Mead, 1934: 152-64).

haviour toward or with them. Throughout our lives we come to learn a host of definitions, meanings and expectations. In a complex and heterogeneous society, such as ours, we learn many expectations, some of which may conflict. The problem of understanding human behaviour thus becomes even more problematic.

The definitions of social situations may or may not come to be shared. Individuals may interact with different or conflicting definitions. Shared definitions and meanings are more likely to occur in situations which necessitate extended and continuous interaction. This is particularly true for groups of individuals who occupy similar positions and face the same or similar situations.

It is this congruence of individual definitions and lines of actions which defines a social group. Members of a social group are so defined because they express and act out a set of mutually shared definitions and expectations. The individual is viewed as a product of the group. The group antedates the individual and provides him a set of meanings and definitions which serve as a framework for his thought and action.

The analysis of social process examines ways in which behaviour of various groups are developed, sustained and changed. The individual and society are seen as linked wherein individual behaviour is continually shaped by social processes and influences. A full understanding requires an understanding of the historical context, the ongoing social structure and the basic processes of social life. Within this framework we hope to link the individual to the larger social and historical context in which he lives.

Herbert Blumer summarizes the basic position of symbolic interactionism in the form of three prepositions or premises:

- 1) Human beings act toward things on the basis of the meanings the things have for them.
- 2) The meanings of such things are derived from, or arise out of, the social interaction that one has with one's fellows.
- 3) These meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters (Blumer, 1969:2).

Methodology

The theoretical perspective of symbolic interaction that underlies this approach takes as a given the idea that the understanding of human conduct requires an understanding of the meanings and definitions which evoke the conduct. To understand the meaning of overt acts requires knowledge of the subjective ingredients and shared interpretations which lie at the base of the behaviour. The study of consumer behaviour therefore emphasizes an explanation of consumer behaviour from consumers' points of view, understanding their actions in terms of their referents.

The study of inner meanings presents a problem particular to the social sciences. Though scientific research requires objectivity, the social scientist must also be concerned with the critically important subjective bases of behaviour. To attempt the understanding of behaviour in the absence of knowledge of the participants' definition is futile. Thus, overcoming objectivity in methods may reduce analysis to a state of sterility. If social science research does not take into account the subjects' point of view, the explanation and analysis rests on intuition. Human action is inseparable from its context, and the meanings of acts cannot be divorced from actors' definitions.

Field study methods provides the modus operandi for data collection about social processes. This approach includes a body of research strategies which allow the researcher to collect data by the most appropriate means. The research strategy is an inductive one, ideally suited for discovering

hypotheses and observing the relationships between several sets of behaviour, different participants, and varying groups in the settings. The advantage of inductive research is that it enables the observer to construct and refine hypotheses as the research continues. Hopefully, this process of reasoning results in a more complete understanding.

The inductive approach facilitates the acquisition of a more nearly complete conceptual framework and the recognition of the relationship of events, sequences of action, and necessary, sufficient, and contributing aspects of the situation. As contrasted with traditional, deductive social science research which seeks to isolate, contrast, and test variables, our strategy is to unveil preceding and surrounding events and circumstances, and their perception by participants.

One objective of ethnographic research is the study of behaviour in natural settings. The study of consumer behaviour is the study of a form of collective behaviour involving the actions of a variety of individuals who bring a set of different experiences and backgrounds, needs and wants to the marketplace.

There are a number of prospective studies that might be fruitfully undertaken. Clearly, if we can agree that consumer behaviour involves a social process then any part of that process deserves attention. Qualitative research could then generate hypotheses which might be tested by more quantifiable techniques.

The model we propose is an inductive one which begins with the idea that hypotheses or hunches about what people perceive about product needs, value, packaging, identification, etc. should be derived by collecting data in natural settings. We assume then rather than begin by testing hypotheses we need to first observe consumer behaviour in an unaffected way. Unobtrusive observation is then complemented by informal interviewing of the consumer about their choice and the important considerations that influence their decisions.

Study participants would, for example, be observed in markets and stores making choices about products. After their choice was made, they would be informally interviewed about what they considered in making their choice. Alternatively, participants would be asked to dictate on tape the process of product selection from the genesis of the idea to purchase decision. They would carry a small tape recorder with them describing the decision-making process as it unfolded.

In both these examples, the social researcher could alter the retail environment by introducing stimuli that would hypothetically influence decision-making. Changes in product location, advertising, price, packaging etc., could be used as variables to influence choice.

The main consideration is the recognition of consumer behaviour as a subjective process and that perceptions and considerations are of prime interest. Moreover the meanings given the series of acts leading to a decision are of interest to the persons marketing products.

Conclusion

Human behaviour is best understood as a social process and, as such, requires a methodological approach which emphasizes the interaction of individuals and groups and the meanings they derive. Fundamentally, marketing and consumer behaviour are social activities inviting a methodology that gets at social process and the interpretive nature of human interaction. The researcher must seek to observe and understand the perspective or role of the subjects of study while at the same time maintaining the distinction between everyday and scientific conceptions of reality. If consumers are the subjects of study then the researcher must link their definitions and interpretations of reality with the social relationships, situations, and

groups that provide those conceptions. Recognizing that activity is constructed and that humans do not respond passively or mechanically to stimuli points to the significance of the meanings given what is perceived in the ongoing context.

Understanding the process by which individuals make decisions and act involves exploring the process by which they adjust and take various lines of action on the basis of their ongoing interpretations of the world. Again Herbert Blumer best summarizes the relationship between the symbolic-interactionist perspective and the importance of a research approach that seeks to unveil the subjective when he says:

On the methodological or research side the study of action would have to be made from the position of the actor. Since action is forged by the actor out of what he perceives, interprets, and judges, one would have to see the operating situation as the actor sees it, perceive objects as the actor perceives them, ascertain their meaning in terms of the meaning they have for the actor, and follow the actor's line of conduct or the actor organizes it -- in short, one would have to take the role of the actor and see the world from his standpoint (1975:325).

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DO THE PARAMETERS OF CHOICE MODELS DEPEND ON DIFFERENCES IN
STIMULUS PRESENTATION: VISUAL VERSUS VERBAL PRESENTATION?

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ABSTRACT

The purpose of this paper is to compare the parameters of conjoint choice models derived from choice tasks in which some of the attributes are described either verbally or visually. A task involving choice of state parks was chosen to test the hypothesis because parks have a substantial visual component such as scenicness that should influence choice. Results suggest little statistical difference in the parameters of models developed from either type of information. Because considerable effort and expense is necessary to insure comparability of verbal and visual attribute descriptions, the research suggests reliance on visual wherever possible.

INTRODUCTION

An issue of considerable importance to conjoint analysis in general, and to consumer choice modeling in particular, is whether one obtains the same results using visual as opposed to verbal representations of choice alternatives. Our review of the available literature discloses little more than anecdotal evidence: for example, Green and Srinivasan (1978) report no evidence that visual and verbal stimulus displays yield the same results, although they do state that, "Alpert, Betak and Golden (1978) report that a combination of pictures and words produced roughly the same results as the purely verbal approach..." (p.111). The reader is left to decide what "roughly" means. The single major study we could find by Holbrook and Moore (1981) also compared the outcomes of conjoint tasks using verbal and visual descriptions of sweaters. However, our understanding of their experiment indicates to us that they made no attempt to insure that the words used corresponded to the drawings. Thus, their conclusions regarding processing differences may have been due to the lack of correspondence. In this paper we address this problem by going to considerable lengths to insure verbal and visual stimulus correspondence.

Of course, there has been considerable research into the effects of pictorial presentations of information in advertising and other contexts (See, e.g., Shanteau and Nagy 1979; Edell and Staelin 1983). This latter research has demonstrated that pictures interact with words to produce effects that are significantly larger than words alone. Thus, despite the vast amount of research available on consumer response to conjoint stimuli, we have been unable to find any direct comparisons of model or process differences that arise from providing information verbally versus pictorially.

A direct comparison of verbal and pictorial attribute representations is important because information about attribute levels is often verbally expressed, or expressed as a combination of verbal and visual information in commercial as well as academic applications. Furthermore, because conjoint tasks are often used to test academic hypotheses, the content of the attribute information may affect the generalizability of the findings. Thus, as with other context effects in conjoint tasks (see, e.g., Huber and Sheluga 1980; Meyer and Eagle 1982), generality is an issue. The purpose of this paper, therefore, is to examine whether there are statistically significant differences in the parameters (and their associated inferences) of conjoint choice models developed from statistically identical tasks that differ only in the mode of presentation of the attribute information used to convey stimulus levels in conjoint choice tasks.

We concentrate on a choice task in order to eliminate the possibility that scale effects could account for the results. We also use a task that should involve a highly visual component in order to create a "worst case" example: if we fail to find differences in this kind of task, there would be less concern about other less visually involved tasks. Hence, we concentrate on consumer choice among state parks because state parks are often selected by consumers on the basis of their scenicness and environmental distinctiveness. These latter elements should make it relatively difficult for verbal descriptions to provide comparable results to visual descriptions, however, our results will show that such was not the case.

THE PARK CHOICE EXPERIMENT

Based on previous research into the park choice behavior of consumers funded by the U.S. Forest Service (Curry, et al. 1983; Louviere and Woodworth 1984), a set of park choice decision factors was compiled. These factors were shown to significantly influence consumer choices among parks in previous empirical work using conjoint choice tasks. As well, the predictions of the choice models derived from such tasks were consistent with the actual park choices that the surveyed consumers were observed to make (Louviere and Woodworth 1984). Questions, however, were raised concerning whether consumers' mental images of the verbal descriptions were isomorphic to visual images.

In particular, U.S. Forest Service researchers strongly felt that visual descriptions of terrain, vegetation and bodies of water were important to add realism to park choice tasks, and therefore the results of the verbal tasks were suspect despite good predictive ability. A key research hypothesis, therefore, is that there are no differences in the parameters of choice models derived from separate park choice tasks in which visual and verbal attribute descriptions were separately manipulated.

A test of the research hypothesis focuses on the three decision attributes mentioned earlier as being of particular concern to the U.S. Forest Service researchers: terrain, vegetation density and water bodies. In order to test the research hypothesis, a conjoint choice task involving hypothetical state parks was developed. The choice task was structured as follows: (a) Each of the three attributes of research interest were assigned visual or verbal levels as described in Table 1, and (b). These attributes were combined with other park choice attributes (Table 1) to produce choice alternatives. (Refer to Table 1).

The visual levels of the three key attributes involved in the test of visual versus verbal hypothesis were selected by the research team from a very large library of color photographs possessed by a member of the U.S. Forest Service research team. Terrain and vegetation density photographs were selected so as to provide perceptually significant monotonic gradations as can be noted in the corresponding Table 1 verbal descriptions. Photographs of creeks, rivers, lakes and ponds were selected to be typical of such features in the Midwest U.S. (where the study was conducted), and so that consumers would closely agree about which was which.

Candidate lists of photographs were first presented to a convenience sample of 125 consumers recruited from a local shopping mall in a Midwestern city. The screening

criterion was that the interviewee had visited a park in the last 2-3 years. Interviewees were shown candidate park scene photographs of the three key attribute dimensions that had been enlarged and reproduced using a color xerox process. They were asked to provide verbal descriptions of each photograph as if they were describing the scene in the picture to someone who had not seen it.

TABLE 1: ATTRIBUTES AND LEVELS USED IN THE PARK CHOICE TASKS

<u>ATTRIBUTE:</u>	<u>VERBAL DESCRIPTION OF THE ATTRIBUTE LEVELS:</u>
TERRAIN:	(1) Flat, prairie-like meadow with some flowers and scattered trees, (2) Gently rolling hills with relatively open forest/woods, (3) Quite hilly and densely forested.
VEGETATION DENSITY:	(1) Flat, weedy meadow with isolated trees and some wet areas, (2) Flat, parklike grassland with numerous shady trees, (3) Flat, very forested, with dense underbrush penetrated by trails.
BODIES OF WATER:	(1) Relatively open creek or brook with trees and plants along grassy banks, (2) Natural/man-made pond in a well-kept grassy or park-like area surrounded by trees and shrubs, (3) River suitable for canoeing flowing through a forested valley (4) Lake/reservoir used for water-sports surrounded by mowed picnic and recreation areas with woods and shrubs.
BOATING:	YES, NO
SWIMMING:	YES, NO
FISHING:	YES, NO
HIKING:	YES, NO
ATHLETIC FIELDS:	YES, NO
PLAYGROUNDS:	YES, NO
PRIMITIVE CAMPING:	YES, NO
IMPROVED CAMPING:	YES, NO
HOW FAR AWAY THIS PARK IS:	(1) Less than 25 miles, (2) 25-75 miles, (3) more than 75 miles.
FEE TO ENTER THE PARK AND USE THE FACILITIES:	(1) Free, (2) \$1.00, (3) \$2.00

The verbal descriptions were content analyzed, and a frequency distribution of word and phrase useage was developed. Three photographs were selected to represent the levels of each attribute based on the following arbitrary, but (we believe) reasonable, criteria: (a) the photographs evoked verbal descriptions that connoted a significant monotonic difference between the levels of terrain and vegetation density, or a recognizable and correct differentiation in the case of the water body pictures; and (b) the interviewees appeared to agree reasonably well in their use of words and phrases to describe these pictures as indicated by the results of the content analyses.

As a further check, the final 10 photographs (three for terrain and vegetation density, and four for water bodies) were enlarged and reproduced by color xerox methods. These reproductions were shown to 25 undergraduate students at a Midwestern university, who were asked to match each photograph with a list of 10 candidate verbal descriptions. The verbal descriptions included the ones assembled by the research team from the content analysis of the verbal descriptions given by the previous interviewees, as well as 'ringers' consisting of combinations of similar words and phrases deliberately constructed to be inaccurate in some significant way with respect to the target photographs representing each attribute.

The 25 students correctly matched the photographs with the verbal descriptions developed by the research team over 85% of the time (low of 76%, high of 92%). We concluded, therefore, that the verbal descriptions were as close as possible to matching the visual scenes given the time and resource constraints involved. In fact, we suggest that it is unlikely that many research projects have gone to such lengths to insure a match between visual and verbal descriptions. The purpose of these efforts was to insure to the extent possible that we could attribute any differences in choice model parameters to visual vs. verbal differences not experimenter ineptitude or laziness. That is, we wished to try to rule out differences due to poor matches in verbal descriptions, thus giving verbal descriptions best possible chance to produce same results.

The experimental design was a near orthogonal main effects plan derived from a $4 \times 3^4 \times 2^8$ factorial involving 40 treatments. The 40 treatments were placed into 20 sets of pairs using a balanced incomplete block procedure. Each treatment in a pair was placed on a separate 8 1/2 x 11 inch sheet of standard typewriter paper, and the sheets were assembled into a looseleaf notebook such that when the notebook was open the pairs faced each other on opposite pages. The designs for visual and verbal information were identical in all respects, except that descriptions of the three key attributes was displayed in color xerox reproductions in the visual condition, and in words in the verbal condition.

Ten different notebooks for each task were assembled for use in ten sampled state parks. The order of the pairs was identical in each notebook to control for differences due to order effects and interviewers. Thus, the order of appearance of the pairs in notebooks was random, but in every notebook the pairs appeared in the same random order. Subjects were 224 individuals intercepted in ten different state parks located in the center of a Midwestern state. A commercial research firm was contracted to obtain no less than 20 interviews in each of the parks.

Color-coded response sheets were prepared for subjects to use to respond to the choice task in each correspondingly colored notebook (white for visual, blue for verbal). In addition to the choice task, selected demographic and park visitation questions were asked after subjects completed the choice task in order to permit comparisons of the sample with those involved in previous park choice research and to allow segments to be developed and compared. The color-coded response sheets were randomly ordered and given to each interviewer. Interviewers were instructed to have each subject complete the task in the notebook that had the same color as the topmost response sheet. In this way, it was possible to control for differences in the way interviewers recruited subjects, differences in the types of subjects recruited and differences due to the parks in which the interviews took place.

Thus, regardless of interviewer or park, respondents were randomly assigned into either verbal or visual tasks by virtue of the random assignment of response sheets. 101 completed interviews were obtained in the verbal task condition and 123 in the visual task condition. Interviewers reported that approximately one percent of individuals approached to do the interview refused to partici-

pate in the task, which took an average of 20-30 minutes to complete.

Analytical interest centers entirely on the aggregate choice responses in the two task conditions. The two sets of data were combined to test the null hypothesis of no significant differences: a common set of main effects was fit to the choice data based on the experimental attributes, and the interaction of each main effect with a dummy variable representing the two different tasks was used to test the null hypothesis. Multinomial Logit Regression was used to analyze the choice data employing the generalized least squares regression procedure suggested by Louviere and Woodworth (1983). The first-pass vector of parameters was operated upon by iteratively re-weighting and updating the parameter vector to obtain the maximum likelihood estimates (Woodworth and Louviere 1985). The results are given below.

RESULTS AND CONCLUSIONS

The critical statistical tests for the null hypothesis center on the interaction effects representing departures from the hypothesis that the estimates are the same in the two task conditions except for sampling fluctuations. The results, contained in Table 2, surprisingly indicate that only two of the seven interaction parameters that bear on the null hypothesis approach conventional significance levels. In fact, only the pond interaction parameter is significant at conventional levels; improved camping is also significant but it has no bearing on the null hypothesis.

Thus, we tentatively conclude that there is little difference in the choice model results due to the differences in verbal versus visual representation of attribute levels. Our conclusion is tentative because our results may be due to pooling subjects who reacted differently to the different levels of attributes in the two tasks, but whose differences averaged out in the aggregation. We could not test this eventuality because the subjects participated in one or the other of the two tasks, making it impossible to group them into comparable subsets on which separate tests could be conducted. If all subjects had participated in both tasks, comparable tests could have been performed, but the length of the interview precluded this.

Additionally, it should be noted that the effects in Table 2 associated with the visual vs verbal terms are small. Thus, retaining the null associated with the such small differences may simply be an artifact of such small statistical effects in the aggregate. We grouped individuals from both conditions (verbal and visual) in an attempt to see whether the aggregation effects were the likely source of the small effects. Recognizing that we cannot dissociate the effect of conditions, these analyses suggest considerable between group differences in responses to the three key decision variables of interest. Thus, we may be understating the differences quite considerably.

Because our study design could not rule out the aggregation hypothesis to account for the results, we normally would suggest that future work be directed toward testing whether aggregation could be ruled out. However, in this case, we believe that practicality argues against pursuing such a course. In particular, even if we assume that our results are correct (that is, there are only minor differences in verbal compared with visual representations of stimuli), the amount of effort required to insure that verbal descriptions correspond to visual is considerable.

Thus, we would conclude that both academic and practical researchers should seriously consider the benefits of visual stimulus presentations in terms of realism and accuracy. We recognize that the use of visual information in some instances may escalate research costs. However, the time and effort involved in developing appropriate verbal descriptions may considerably outweigh the additional costs of preparing and administering visual mater-

ials. Furthermore, one must have the visual materials first in order to develop the verbal materials; thus, we can see few instances in which researchers would want to use verbal information if there are questions about the ability of the verbal descriptions to convey the same information.

TABLE 2: STATISTICAL RESULTS PERTINENT TO THE NULL HYPOTHESIS*

ATTRIBUTE (LEVEL)	ESTIMATED PARAMETER***	STD. ERROR	T-VALUE	INTERACTION PARAMETER	STD. ERROR	T-VALUE
LEFTPAGE**	2.55	0.18	14.41	0.26	0.18	1.47
RIGHTPAGE**	2.62	0.19	14.16	0.28	0.19	1.51
TERRAIN (Low)	-0.07	0.04	-1.61	0.08	0.04	1.83c
TERRAIN (Med)	-0.08	0.04	-1.98	0.03	0.04	0.74
VEGET'N (Low)	0.00	0.05	0.00	0.05	0.05	1.09
VEGET'N (Med)	-0.06	0.04	-1.54	0.00	0.04	0.00
CREEK	-0.10	0.05	-2.04	0.07	0.05	1.43
POND	0.02	0.05	0.37	0.11	0.05	2.01b
RIVER	-0.01	0.04	-0.23	0.01	0.04	0.23
BOATING	-0.23	0.04	-6.27	0.01	0.04	0.27
SWIMMING	-0.27	0.03	-9.00	-0.01	0.03	-0.33
FISHING	-0.42	0.03	-12.35	-0.00	0.03	-0.00
HIKING	-0.25	0.03	-7.35	0.05	0.03	1.47
ATHLETICS	-0.05	0.04	-1.35	-0.02	0.04	-0.54
PLAYGROUNDS	-0.07	0.04	-1.84	-0.01	0.04	-0.26
PR. CAMPING	-0.15	0.04	-1.32	0.00	0.04	0.00
IM. CAMPING	-0.48	0.03	-15.00	0.09	0.03	2.81a
DISTANCE (Low)	0.40	0.04	9.30	-0.06	0.04	-1.40
DISTANCE (Med)	0.26	0.04	6.67	-0.04	0.04	-1.03
ENTRY FEE (Low)	-0.02	0.04	-0.50	-0.01	0.04	-0.25
ENTRY FEE (Med)	-0.04	0.04	-0.98	-0.03	0.04	-0.73

a - SIGNIFICANT @ ALPHA = .01
 b - SIGNIFICANT @ ALPHA = .05
 c - SIGNIFICANT @ ALPHA = .10

* All results are relative to the base alternative, i.e., prefer the park in which they were interviewed.

** Represent "alternative-specific" constants for, respectively, parks A (always on left page) and B (always on right page). If there is no position bias and if the distribution of attractiveness of the parks in A is approximately the same as that of B, the two coefficients should be equal (obviously they are).

*** All variables were coded as (-1, +1) except for Leftpage and Rightpage (coded 1,0).

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OBJECT RELATIONS THEORY: MALE AND FEMALE DIFFERENCES IN VISUAL
INFORMATION PROCESSING

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Abstract

This exploratory study of male and female differences in visual information processing and perception investigates two hypotheses suggested by object relations theory. Results of a content analysis of open-end recall data for two advertisements with different themes, one representing relationship webs (high connected) and the other representing hierarchical object presentation (low connected) are described. While females were more likely to report seeing relationships stated in gender role terms than males for the high connected advertisement, there were no sex differences in the frequency of recall of isolated, spatial elements for the low connected advertisement.

Introduction

Consumer behavior researchers have addressed the topics of sex roles (cf., Debevec and Iyer 1986; Della Bitta 1984), gender (cf., Gentry and Haley 1984; Roberts 1984), and visual information processing (cf., Jensen and Rottmyer 1986; Hansen 1984). While these three areas conceptually complement each other, consumer behavior researchers have not yet attempted to empirically synthesize them into one coherent frame.

This paper suggests a conceptual framework for synthesizing sex, gender and visual information processing utilizing object relations theory (Chodorow 1978; Gilligan 1982; Eichenbaum and Orbach 1983). This theory suggests that images acquired during the first two years of life continue to function at a precognitive level and may have an impact on the way males and females process visual information. Hypotheses suggested by object relations theory, predicting differing cognitive processing outcomes for males and females, are tested via a content analysis of the recall of visual advertising information.

Before describing object relations theory, it is important to clarify the meanings and use of the terms "sex" and "gender" in this paper. These terms are often used interchangeably in the consumer behavior literature (e.g., Debevec and Iyer 1986); however, in the sociological literature there is a clear distinction between the denotations of "sex" and "gender". Sex refers to "the dichotomous distinction between males and females based on physiological characteristics" while gender refers to "the psychological definitions of the dimensions 'masculine' and 'feminine'" (Oakley 1972).

Object Relations Theory

Freud's disciple, Melanie Klein, developed the basis for object relations theory. In Melanie Klein's expression of object relations theory, she focuses on the images that an individual experiences in their early development as one explanation for adult cognitive processing. According to Klein and her followers, the feeling of self (including gender perceptions) arises from a tension between the individual's goals in relation to other objects in the environment.

It is important to note that in this theory, "objects" are defined differently than conventional usage of the term would suggest. "Objects" are entities (the primary ob-

jects are people) that the infant becomes involved with during the developmental process. Thus, objects (such as people or any phenomenon outside of the infant's body) can impede the infant's goals, resulting in tension. Likewise, objects in the environment can also facilitate the individual infant's goals (relieving tension). In this manner, object relations theory posits the developmental process as interactive. It further stipulates that human action must always be understood in the context of a particular situation and the sociocultural environment.

In more recent years, theorists have extended object relations theory to look at the differences between sexes (Eichenbaum and Orbach 1983). Chodorow (1978), Gilligan (1982) and Rubin (1983) each postulate a model of psychological development in which the connection between individual experience, personality, and the material world reflects the impact of present child-rearing and gender relations. Chodorow (1978), Gilligan (1982) and Rubin (1983) also draw on object relations theory to describe the emergence of different modes of thinking about relationships which may be empirically associated with male or female responses to situations requiring judgement and action.

Chodorow's (1978) explanation of male and female cognitive differences focuses on women being the primary caretakers of infants in the Western culture; thus, the importance of the female during infancy results in children of both sexes psychologically comparing themselves to a female. The meaning children ascribe to this process and its subsequent impact on the continuing development of cognitive strategies is generally different for girls than for boys (i.e., girls might see themselves as similar to the female and boys might see themselves as different from the female). Specifically, the ongoing mother-daughter attachment reproduces the social arrangement whereby women continue to be the primary figures in the lives of infants of both sexes.

Rubin, whose orientation is primarily clinical, believes that themes of separation (for boys) and unity (for girls) are incorporated into the personality structure at a pre-oedipal age and that these differences affect crucial parts of the lives of both men and women (Rubin 1983). Gilligan (1982), however, draws upon the "texts of men's and women's fantasies" to specifically elaborate these themes into images of a web of connected relationships (empirically associated primarily with women) or a hierarchy of object separation (empirically associated primarily with men).

Gilligan (1982) examined the different cognitive schemes used by males and females as they pertain to moral judgement and subsequent action in life or death situations. Briefly, Gilligan (1982) studied males and females of different ages to examine their cognitive processes. She found that younger females tended to process information in the context of social relationships or what Gilligan refers to as the "web". For females, connectedness to other people was the most important criteria for decision-making. Males, however, tended to look at situations as distinct from social relationships and as isolated, abstract events to be approached "logically".

Sex Differences in Cognitive Functioning

The most basic problem in any research on sex differences is that the researchers begin with the underlying assumption that sex differences exist and that they are important (Basow 1980). Although most of the evidence sug-

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gests that variation within each sex is greater than differences between them (Basow 1980; Burstein, Bank, and Jarvik 1980), testing hypotheses of sex differences is grounded in an epistemology of difference, not similarity. First, researchers cannot accept a null hypothesis (only fail to support it) and, second, it is possible that studies reporting no statistical differences would be more difficult to publish. Therefore, the literature on sex differences is likely to be more representative of studies resulting in statistical differences between the sexes than it is of the (potentially unpublished) research finding no sex differences.

Aside from problems with methodology, findings in this area are further confounded by whatever personal or political aspects of sex differences a scientist happens to take for granted when testing a theory or interpreting results. For example, Burstein, Bank, and Jarvik (1980) and Basow (1980) each review a number of studies that found boys and men, on the average, tend to score higher than girls and women in tests of spatial abilities and that females tend to score higher than males on tests of verbal abilities.

Field dependence-independence is one of the few psychological variables for which clear-cut evidence of sex differences exists in the literature. Studies by Witkin (1962) and his followers consistently show women to be more field dependent than men and men to be more field independent than women. Once considered a valid measure of global analytic abilities (Witkin 1962), the act of straightening a rod in a tilted frame while seated in a darkened room has now become just one more spatial task. Burstein, Bank and Jarvik (1980) summarize the curious history of the field dependence-independence variable:

"One likely reason for the preponderance of studies of field dependence-independence may well be the consistent finding of male superiority on this measure. Most of the investigators have been men. Field independence, and not field dependence, has been associated with positive value in our culture: the field independent cognitive style has been characterized as "differentiated, self-reliant, analytic" as opposed to a field dependent style which is considered "passive and conforming"

These confusing and contradictory data on the existence and determinants of sex differences in cognitive abilities (Basow 1980; Burstein, Bank, and Jarvik 1980) suggest to some researchers that consumer behavior specialists ought to terminate research into psychological gender differences (Roberts 1984). Perhaps they are right; however, consumer behaviorists who continue to emphasize the disadvantages of psychological factors for examining gender differences may neglect the advantages of sociological ones.

Relevance to Consumer Behavior

Tucker (1977) suggests that during a time of rapid social change people of both sexes find it useful "to behave in ways and to voice sentiments that are discrepant with their most centrally held attitudes and values" about the personal meaning of their gender identity. Tucker (1977) speculates that "the notion of sexual equality begun perhaps...in the eighteenth century may fully reach the hearts of men of both sexes in developed areas within two generations, about the year 2025". In the meantime, he predicts, "...marketers will increasingly miss the center of their markets because they will not understand them. And the changes in the relations of the sexes will be the primary cause" (Tucker 1977).

Tucker's (1977) comments about the impact of slow cultural change on the subjective condition of "men of both sexes" does not suggest that human action cannot create social and institutional change; or that research on sex differences, justifiably found socially and scientifically wanting, demonstrates that gender expectations we manufacture are determined at the cellular level and therefore immutable. Instead, we interpret Tucker's argument as an invitation for consumer behaviorists to continue research into

sex differences and we propose that the research should be grounded in a body of theory that accommodates a phenomenological perspective.

Speaking for "...a disaffected and growing minority of researchers interested in moving beyond the positivist cognitive psychological orientation in consumer behavior studies," Sherry (1986, p. 574) calls for a cultural perspective in consumer behavior research. Such a perspective is reflected in the application of object relations theory to investigate the visual information processing of males and females.

Purpose and Hypotheses

The primary purpose of this study is to investigate the differences in visual information processing outcomes between males and females for two types of advertisements: one for which the dominant theme centers around relationships among people (high connectedness) and one for which the dominant theme utilizes visual presentation of isolated objects (low connectedness). As suggested by object relations theory (Gilligan 1982), women are expected to process information in terms of webs or networks (i.e., connectedness among objects, such as relationships among people), and when the visual objects are people of varying ages and sex, this processing focus would be expected to manifest itself in terms of a heightened perception of gender role relationships.

Thus, the following hypothesis is suggested by object relations theory for males and females viewing an advertisement high in "connectedness" (webs of interpersonal relationships).

H₁: When viewing a visual stimulus that includes individuals of mixed age and sex, females will be significantly more likely to recall seeing relationships than will males.

For an advertisement featuring human connectedness, it is expected that the relationships females recall will be described in gender role terms.

The second hypothesis is specific to an advertisement featuring a theme low in "connectedness" and also incorporates predictions from the field independence-dependence theory. As previously discussed, field independence-dependence theory suggests that males will focus more upon the individual elements (or figure), as distinct from the ground of a stimulus. In addition, it is expected that males will be more likely to recall isolated (hierarchical) elements of the advertisement than will females because of their increased propensity to perceive abstract and individual objects, as suggested by object relations theory (which offers an explanation for the sex differences in field independence-dependence studies).

H₂: When viewing a visual stimulus that includes a predominant theme of isolated elements (low in connectedness), males will describe their recall in quantitative terms and will report spatial relationships with isolated elements more frequently than will females.

METHOD

The methodology consisted of several phases: product and advertisement selection (stimuli), design of the instrument and administration, the qualitative content analysis and the quantitative analysis of the results. This section describes the methodology through the qualitative content analysis.

Product and Advertisement Selection

Soft drinks were selected as the experimental product category because three important criteria were met: 1) high familiarity among a student sample, 2) soft drinks could be considered a gender neutral product stimulus (Gentry and Haley 1984), 3) competing brands were widely advertised through varied types of appeals (which was helpful for the selection of specific advertisements). In order

to select the specific experimental manipulations, a panel of four judges reviewed tapes of commercially developed 30-second advertisements for familiar brands that had not been aired in the study area. Each advertisement was evaluated on the basis of the type of appeal used and there was clear agreement among judges (two males and two females) regarding the characteristics of the two advertisements selected for this study.

The judges evaluated the advertisements as representing feeling (i.e., emotional) or thinking (i.e., rational or utilitarian) appeals; however, these appeals could be facilitated through a variety of themes. The focus of this study is on the specific theme through which the appeals are represented.

A Royal Crown Cola advertisement was selected as representing the social relationship, high connected theme (in the context of a "happy" emotional appeal) and a Seven-Up advertisement was selected for its use of a low connected theme (in the context of a rational appeal). A description of each of the advertisements will further clarify their characteristic themes.

The Royal Crown Cola advertisement showed a man, a woman and a male child in the country (people of mixed ages and sex). The audio content consisted of a woman's voice singing about having moved to a farm in the country and enjoying her life there. She was shown in various activities with the man and the child (e.g., working on the farm, chewing straw and joking with each other), as well as sitting alone for a few moments. The advertisement concluded with the RC Cola jingle ("Me and my RC"). No explicit oral mention was made of any gender role relation terms.

The Seven-Up advertisement showed three bottles in three bags, three glasses, and a man's hand putting ice in the glasses, pouring from one of the bags and finally removing the bottle from the bag to reveal the brand of soft drink as Seven-Up. At the end, the hand put a sticker that said "The Uncola" on the bottle. The audio portion of the advertisement consisted primarily of the sound of ice hitting the glasses and the sound of a carbonated drink being poured over ice. A man's voice referred to the product as "wet, wild, and refreshing" and at the end of the ad suggested reaching for a Seven-Up, "the Uncola".

The Seven-Up advertisement was selected as being low connected because it focused on what the product does in isolation of what people might do when they use the product (including activities with other people). Physical product attributes were important in this advertisement (the transmittal of image and imagery notwithstanding) and there was no suggestion of social relationships (connectedness) among or between people.

Design of the Instrument and Administration

The advertisements selected for this study were transferred to two separate videotapes to be shown in the context of four other television advertisements. The soft drink commercial was the second advertisement on each of the tapes. The other three commercials on each tape were evaluated by the four judges to represent the same type of appeal (rational or emotional) and the order of the other three products (airlines, hair care and petroleum company) was held constant between the two tapes.

A total of eighty-one undergraduate business students at a large Southwestern university participated in this study. One class viewed the tape of emotional appeals (n = 43, high connected advertisement) and two classes (due to varying number of students) viewed the tape of rational appeals (n = 38, low connected advertisement). After watching the advertisements in a group setting, respondents completed the instrument.

The first section of the instrument elicited an affective response to the advertisement by asking, "Overall, to what extent did you like or dislike the advertisement?" Respondents circled their opinion on a bi-polar horizontal

seven-point scale, with seven representing the highest positive extreme.

Respondents were next asked, "Please describe all that you remember seeing in the advertisement," and were instructed to write their response on the back of the page (8½" by 11"). Thus, open-end responses were not limited by space. The amount of time was limited to several minutes, although everyone appeared to have completed their response well within the time allocated. Respondents answered several other questions not related to the topic of this study.

Content Analysis

The open-end visual recall data were content analyzed. The analysis focused on the specific words and phrases reported by each respondent, as well as the quantity of visual information processing. However, since an appropriate content analysis involves correspondence between the analytical approach used and the relevant properties of the context (Krippendorff 1980), the content analysis categories are specific to each stimuli.

Three content categories were initially developed for the analysis of the visual information contained in the high connected advertisement. The content of the responses to the advertisement were counted with respect to: 1) the number of times a gender role relationship term is mentioned (e.g., wife, son, husband, family, mother, father, parents, Mom, Dad, "her kid", and "her man"), 2) the activity recalled (e.g., doing farm chores, walking and splashing in water, playing, and sitting and talking) and 3) the amount of detail (e.g., number of details about the people or their surroundings) recalled as having been seen in the advertisement.

A fourth content category, representing a summary measure of the over-all quantity of information recalled, was developed from the last two categories above and a count of the number of people each respondent mentioned they saw in the advertisement. Inspection of the array of responses across all respondents and all three content analysis categories showed clearly that the quantity of recall was distributed bi-modally. There was a "natural" break in the data such that a respondent tended to recall either "a lot of information" or "a little information". Thus, the amount of information recall reflected by each person's response was categorized as either "high recall" or "low recall". Operationally, and as suggested by the data, high recall responses included mention of each of the three people in the advertisement (irrespective of the way they were described--in terms of gender role or not), at least two activities, and more than one contextual detail.

The visual information contained in the low connected advertisement was described by: 1) mention of spatial elements (direction of movement, camera angle, location of label, shape of glass, shape of sticker), 2) mention of quantities (amount of liquid, number of bottles, number of bags, number of glasses, number of cans), and 3) mention of isolated elements (man's hand, neck of bottle, top of bottle). Mentions of details in isolation, (i.e., bottle necks, man's hand) are used as an operationalization for a general category of separation of visual elements recalled in the advertisement.

The amount of information recalled in the low connected advertisement was based on whether or not a respondent mentioned at least one spatial element, one quantitative aspect, and one isolated element in their response. If all three were mentioned, the response was classified as "high recall" and if not it was classified as "low detail". Again, the cut-point for the dichotomization of high and low detail was suggested by the distribution of the data.

STATISTICAL ANALYSES AND RESULTS

The data from the content analysis were submitted to statistical analysis for hypotheses investigation. The analyses and results for each hypothesis are described in this

section.

Hypothesis 1

Hypothesis 1 is specific to the high connected advertisement and predicts that when viewing a visual stimulus including individuals of mixed age and sex, females will be more likely to recall having seen relationships (expressed in gender role terms) than will males. To test this hypothesis, using respondents as the unit of analysis, the number of females mentioning (and not mentioning) any gender role relationship (irrespective of how many) was compared to the number of males mentioning (and not mentioning) any role relationships. These data are presented below.

	Females	Males	Total
Mentioned any role	23	10	33
No mention of role	2	8	10
Total	25	18	43

Results of a chi square test of independence indicated support for Hypothesis 1 ($X^2 = 7.77$, $df = 1$, $\alpha = .01$, with a fourfold point correlation of .425). The fourfold point correlation of .425 suggests that there is a strong association among these variables. Thus, these data suggest that females were more likely than males to report seeing at least one relationship which they expressed as a gender role and males were more likely to omit any mention of role relationships from their descriptions of what they saw in the high connected advertisement.

The analysis just discussed focused on whether or not a respondent mentioned a gender role relationship when stating what they saw in the advertisement (i.e., for each respondent, a role relationship was either mentioned or not mentioned and the number of role relationships mentioned by a respondent was disregarded). The data were also submitted to chi square analysis for the total number of role relationships mentioned across all subjects (with expecteds proportional to the sample sizes), addressing the question, "Is the total number of mentions distributed proportionately between males and females?"

The total number of role mentions by sex for all subjects, including those with no role mentions, is reported below.

	Females (n=25)	Males (n=18)	Total (n=43)
Total role mentions	50	16	66

A chi square test was statistically significant ($X^2 = 8.55$, $df = 1$, $\alpha = .01$), supporting the hypothesis that females used significantly more gender role terms to describe what they saw in the relational advertisement than did males. (As another perspective on these data, the mean number of gender role terms mentioned by females was more than twice that of the number mentioned by males across the total sample: 2.00 and .89, respectively.)

As a final perspective on the first hypothesis, respondents who made no mention of gender role relationships were eliminated from the next analysis. Thus, the frequency of mentions remains the same as above, but the number of respondents included is decreased (to 23 for females and 10 for males), affecting the expected values (which are treated as proportional to the sample size).

The chi square test of independence was statistically significant ($X^2 = 5.16$, $df = 1$, $\alpha = .05$) indicating that females who mentioned gender role relationships did so more frequently than did males. Again, the means are also supportive of this conclusion (the mean number of gender role mentions is 2.174 for females and 1.6 for males).

Hypothesis 1 was supported for all of the three analyses described above. The results of these data suggest that not only were females more likely to report having seen (any) gender role relationships than were males, but females who saw relationships also reported seeing a larger number of gender role relationships than did males who saw

gender role relationships. Thus, females were more likely to mention gender roles and were more likely to mention gender roles more frequently.

It is interesting to note that males tended to qualify their descriptions of gender role relations, whereas women did not. For example, males would report having seen "a male figure, most likely her husband," or "a woman who appears to be with her husband and son" and women would simply state "mother," "son," "husband," etc. for the visual objects recalled.

An old husband's tale suggests that females may find more in their environment to talk about than do men (i.e., talk more). Related to this idea, as previously discussed, women tend to score higher on verbal tasks than do males. This skill might be associated with an increased propensity for verbal expression (no cause and effect suggested or established).

Therefore, the data were analyzed to address potential alternative explanations for women reporting higher recall of gender role relationships than men. That is, the results may have occurred not because women are more sensitive to the presence of gender role relationships in their environment, but simply as an artifact of women, per se, seeing and describing more information (of any type) than men.

As previously discussed, the content analysis indicated the sample consisted of "high recall" and "low recall" persons. High versus low recall response frequencies are presented below for males and females.

	Females	Males	Total
High recall	12	7	19
Low recall	13	11	24
Total	25	18	43

A chi square test of independence revealed no significant relationship between amount of information recalled and sex ($X^2 = .34$, $df=1$). Thus, for these data, sex was not associated with how much a person recalled seeing in the advertisement but, rather, the gender role relationship content of what was recalled about the visual stimuli.

Another possible explanation for the sex differences in recall of gender role relationships for the high connected advertisement is that females liked this type of theme and appeal better than the males and, hence, recalled the relationship aspects of the advertisement more than did men. To investigate this potential explanation, a t-test was computed to compare male and female responses on the affect rating scale (mean male affect = 4.72 and mean female affect = 5.60). While females tended to "like" the high connected advertisement better, this result was not statistically significant ($t = .24$, $df = 41$). Thus, neither of the potential alternative explanations tested for the differences in gender role relationship recall between males and females were supported by the data for the high connected advertisement.

Hypothesis 2

Hypothesis 2 is specific to the low connected advertisement and predicts that males will be more likely to describe their recall in terms of isolated elements, spatial and quantitative terms than will females. The frequency distribution of quantitative comments, spatial relationships and isolated elements recalled from the low connected advertisement is shown by sex below.

	Females	Males	Total
Mention of quantitative, spatial or isolated elements	20	15	35
No mention of the above elements	0	3	3
Total	20	18	38

A chi square test of independence on the above data was not statistically significant ($X^2 = 3.63$, $df = 1$). Thus, these data did

not show sex to be systematically associated with recall of spatial and quantitative relationships or isolated elements for the low connected advertisement. As for Hypothesis 1, Hypothesis 2 was tested for the total number of mentions of quantitative, spatial and isolated elements by females (53 mentions, n=20) versus males (52 mentions, n=18).

The results were also not significant ($X^2 = 1.82$, $df = 1$) when the analysis was conducted with respondents mentioning at least one quantitative, spatial or isolated element (n=20 for females and n=15 for males). Thus, Hypothesis 2 was not supported and males did not report recalling quantitative, spatial or isolated elements in the abstract advertisement to any greater extent than did females.

While the number of elements did not differ between the sexes, the specific isolated elements recalled were dramatically different, potentially suggestive of Freudian psychology. Twelve males and one female mentioned bottles while twenty females generated fifteen responses about glasses with only two males mentioning glasses. These curious results suggest that motivation research is not (quite) dead and that there were differences between males and females in their recall of the low connected advertisement (in terms of exactly what isolated elements were recalled), just not along the directions specifically hypothesized.

A chi square computed to investigate sex and amount of information recalled from the low connected advertisement was not significant ($X^2 = .86$, $df = 1$). A t-test between mean affect ratings for males (4.83) and females (4.79) viewing the low connected advertisement was also not significant ($t = .39$, $d.f. = 35$).

DISCUSSION AND CONCLUSIONS

Consistent with object relations theory predictions, females were more likely than males to report having seen gender role relationships for advertisements with models of mixed ages and sex. The high connectedness advertisement made no statements about gender roles, but given the potential to infer such relationships, women tended to make gender role relationship inferences, whereas men did not. Men and women recalled the same stimulus differently.

Females were more likely to mention recalling relationships, and also tended to describe the relationships in gender role terms. In addition, for the males and females recalling the advertisement in gender role terms, the females recalled more gender role relationships. These results do not appear to be related to sex differences in the global amount of information recalled or affect toward the advertisement. Thus, for this study, sex was associated with what was recalled, rather than the over-all quantity of information recalled.

A second advertisement, high on isolated elements and low on connectedness, was studied to increase external validity and investigate male visual information processing as suggested by object relations theory. For this low connected advertisement, there were no differences between sexes in perceptions of isolated elements, spatial orientation and number of quantitative statements. Thus, males did not tend to perceive isolated elements any more than did females.

The results of this exploratory study are restricted to the specific methodology used; however, this research suggests that differences in male and female visual information processing do exist and that object relations theory can provide a useful theoretical grounding for investigating sex differences. Visual images may be extraordinarily powerful, not just because of the impression they make at the moment (which has been the primary consumer behavior focus on visual imagery) but because of what they suggest about the past. As Tucker (1977) noted, marketers may miss the center of their markets in the future because they fail to understand the implications of changing relations between the sexes. These changing relations may

also result in changes in the differences between men and women in their visual information processing. However, to understand the changes, we must first have an idea of what the differences are now. This paper is a step in that direction.

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CONSTRUCTS AND MEASURES OF INDIVIDUAL DIFFERENCES IN IMAGERY PROCESSING: A REVIEW

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Abstract

This paper reviews characteristics of measures designed to test individual differences in imagery processing. Scales in three domains are reviewed: (1) measures of imagery ability (2) measures of processing style and (3) measures of daydreaming/fantasy content and frequency. Awareness of the content and psychometric properties of these scales is important for future research on imagery.

Introduction

Imagery is a process by which sensory information is represented in working memory (MacInnis and Price 1986). In a consumer context, the use of imagery in processing both visual and verbal information can enhance memory for product related information (Rossiter 1982; Childers and Houston 1983, 1984; Kisielius 1982; Lutz and Lutz 1977; Rossiter and Percy 1983). Imagery may also serve as a form of cognitive elaboration (Greenwald and Leavitt 1984), and play an important role in forming product attitudes (Rossiter and Percy 1978; Percy and Rossiter 1980; Kisielius and Sternthal 1984, 1986). Hypotheses concerning the role of imagery in forming purchase related expectations and its subsequent impact on post-purchase satisfaction have also been advanced (MacInnis and Price

1986). Finally, imagery has been hypothesized to accompany hedonic consumption activities (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982).

As research on imagery continues, identifying adequate measures of imagery processing becomes particularly important. One area that has generated considerable interest elsewhere is the study of individual differences in imagery processing. Three areas of interest are studies of individual differences in (1) imagery ability (2) imagery processing style and (3) imagery content. These areas are of interest both for their direct and moderating roles on the processing on consumption-related information. This paper reviews measures of individual differences that assess these dimensions. This paper's focus is on the psychometric properties of individual scales, specifically their reliability, convergent validity, and discriminant validity. These empirical criteria, while necessary contributors to the scales' construct validity, should not, however, be taken as evidence of their construct validity. Additional nonempirical criteria such as the logical relationships between constructs and measures in a network of relationships must also be considered (Peter and Churchill 1986). Table 1 summarizes the paper and serves as a framework for discussion.

TABLE 1

MEASURES OF IMAGERY-RELATED CONSTRUCTS

<u>Tests of Imagery Ability</u>				
<u>Test</u>	<u>Purpose</u>	<u>Internal Consistency</u>	<u>Test-Retest Reliability</u>	<u>Comments</u>
1. Betts Questionnaire Upon Mental Imagery (QMI) Sheehan (1967) Betts (1909)	Test of imagery vividness in each of 7 modalities. 35 items. Five items for each modality. 7 point response scale.	Juhasz (1972) .95 (N=67) odd/even	Sheehan (1967) .78 (N=62) 7 months	Some studies report significant sex differences in vividness. (Sheehan 1967; White, Ashton & Brown 1978; Durn-dell & Wetherick 1976). Potential social desirability effects (Divesta, Ingersoll and Sunshine 1971; Richardson 1978).
		Westcott & Rosenstock (1976) .91 (N=147) alpha .94 (N=147) alpha	Evans & Kamemoto (1973) .91 (N=35) 6 weeks	
			Westcott & Rosenstock ('76) .74 (N=147) 2 weeks White, Ashton & Brown ('78) .59 (N=251) 23 months	
2. Vividness of Visual Imagery Questionnaire (VVIQ) (Marks 1973)	Imagery vividness for visual modality only (some imagery control Gur & Hilgard 1975) 16 items. S's rate vividness of imagery of 4 variants of 4 familiar scenes. 5 point response scale	McKelvie & Gingras (1974) .93 (N=87) split half	McKelvie & Gingras (1974) .67 (N=33) 3 weeks	Scores may be affected by instructions (McKelvie & Demers 1979) May also measure imagery trol (Gur & Hilgard 1975; Childers et al 1985) Potential social desirability effects (Childers et al 1985)
		Marks (1973) .85 (N=150) odd/even	Marks (1973) .74 (N=68)	
		Rossi (1977) .94 (N=119) odd/even .91 (N=119) odd/even .96 (N=88) alpha .94 (N=88) alpha	Rossi (1977) .73 (N=88) 7 weeks	
		Dowling (1973) .94 (N=100) alpha		
		Childers, et al (1985) .84 (N=54) alpha .85 (N=85) alpha		
3. Gordon Test of Visual Imagery Control (VIC) Gordon (1949) Richardson (1969)	12 items designed to test the ability to manipulate and control imagery. 2 or 3 point response scale.	Juhasz (1972) .88 (N=67) odd/even .95 (N=12) odd/even	McKelvie & Gingras (1974) .84 (N=33) 3 weeks	Scale may not be unidimensional (Westcott & Rosenstock 1976) Complex factor structure for a small scale Social desirability does not appear to be a problem (Childers et al 1985)
		McKelvie & Gingras ('74) .76 (N=87) split half	Westcott & Rosenstock ('76) .83 (N=147) 2 weeks	
		Westcott & Rosenstock ('76) .64 (N=147) alpha .66 (N=147) alpha		

Tests of Imagery Ability con't

<u>Test</u>	<u>Purpose</u>	<u>Internal Consistency</u>	<u>Test-Retest Reliability</u>	<u>Comments</u>
3. continued		White et al (1976) .72 (N=939 males) alpha .72 (N=1628 females) alpha		
		Childers et al (1985) .75 (N=54) alpha .77 (N=52) alpha		

Tests of Processing Style

Visualizer/ Verbalizer Ques- tionnaire (VVQ) (Richardson 1977)	Designed to test preference for and frequency of visual vs. verbal proces- sing (e.g., encoding, cognizing)	Childers et al (1985) .54 (N=263) alpha .66 (visualizer)(N=263) .64 (verbalizer)(N=263) .57 (N=52)	Warren & Good (1979) .49 (Males) (3 weeks) .29 (Females) Richardson (1977) .91 (N=37) (1 week)	Visualizer scale may tap more ability than prefer- ence causing scale multi- dimensionality.
2. Style of Pro- cessing Question- naire (SOP) Childers et al (1985)	22 item scale de- signed to test preferences and propensity for visual vs. verbal processing. 4 point true-false scale.	Childers et al (1985) .88 (N=54) alpha .81 (N=54) (verbal) .86 (N=54) (visual)		No apparent social desir- ability effects (Childers et al 1985) Partial predictive validi- ty demonstrated with memory measures (Childers et al 1985)

Tests of Daydream/Fantasy
Content and Frequency

<u>Test</u>	<u>Purpose</u>	<u>Internal Consistency</u>	<u>Test-Retest Reliability</u>	<u>Comments</u>
Wilson-Barber Inventory (Wilson and Bar- ber 1978; 1983) Children's Form (Myers 1983)	Test of imagina- tive fantasy abil- ity and involvement in fantasy Children's form has 48 dichotomous items.	Myers (1983) .89 (N=1337) KR-20 (Children's Form)	Myers (1983) .87 (N=104) (Children's Form)	Sex effect. Females score higher than males (Myers 1983)
Imaginal Process In- ventory (IPI) (Sin- ger & Antrobus 1972) Earlier version called Daydream Questionnaire (DDQ) (Singer & Antro- bus 1963). Short version currently in use (Huba, Singer, Aneshensel & Antrobus (1982).	Inventory of 344 items in 29 scales. Designed to assess individual differences in day- dreaming content and frequency, vividness, controllability and general feelings about daydreaming. Items scored on 1-7 point scales. Shortened ver- sion (45 items) taps imagery vividness, fan- tasy imagery, anticipa- tion imagery, problem solving with imagery, arousal from imagery.	Singer & Antrobus .31 to .81 with \bar{X} of .81 (1966 form) alpha Giambra (1977) .52 to .95 with \bar{X} of .82 (1970 form) alpha Taylor & Falcomer (1979) .60 to .90 (N=181) split half	Cundiff & Gold (1979) .49 to .86 with \bar{X} of .69 (N=39) average of 6.8 weeks for 7	3 clusters consistently identified: (1) positive- vivid daydreamer (2) guilty-dysphoric day- dreamer (3) mindwander- ing-distractible day- dreamer. Scores vary with age, sex, grade, SES and IQ (Giambra 1977, Singer & Antrobus 1972, Taylor & Falcomer 1979)

Measures of Imagery Ability

Measures of Imagery Vividness

Imagery vividness refers to the ability with which one can evoke clear images (Marks 1972). Imagery vividness has a known moderator effect on incidental learning (see Forisha 1978, review), discriminative reaction time (Gur and Hilgard 1975), and emotional and physiological arousal (Drummond, White and Ashton 1978, Grossberg and Wilson 1968). Two scales commonly used to assess individual differences in imagery vividness are Betts Questionnaire Upon Mental Imagery and Marks Vividness of Visual Imagery Questionnaire.

Betts Questionnaire Upon Mental Imagery. The Betts Questionnaire Upon Mental Imagery (QMI) assesses imagery

vividness in each of seven sensory modalities (visual, auditory, cutaneous, kinaesthetic, gustatory, olfactory and organic). Five items assess vividness in each modality. For example, respondents rate the visual clarity of the sun as it sinks below the horizon (visual modality), the smell of paint (olfactory modality), the touch of fur (cutaneous modality), the taste of salt (gustatory modality), the muscular feeling of running upstairs (kinaesthetic modality), the sound of a mewling cat (auditory modality) and the sensation of hunger (organic modality). Using a seven point response scale, respondents indicate the extent to which images are (1) perfectly clear and as vivid as the actual experience to (7) no imagery present. Initially developed as a 150 item questionnaire (Betts 1909), the scale was modified and reduced to 35 items by Sheehan (1967) (see Sheehan 1967 for a reproduction of the scale).

As Table 1 indicates, the internal consistency of the scale is fairly high, with reliability coefficients ranging from .91 (Westcott and Rosenstock 1976) to .95 (Juhasz 1972). Women tend to score consistently higher than men (Sheehan 1967; White, Ashton and Brown 1978; Durndell and Wetherick 1978). Moreover test-retest reliability declines substantially as time between the tests increases. Some (Divesta et al 1971; Durndell and Wetherick 1976) have also reported social desirability effects with this scale, particularly with males (Richardson 1978). Inconsistent results have also been found in determining the factor structure of the scale. Richardson (1969) proposes that the scale measures a single factor, however, White, Ashton and Law (1976) identified several factors. One was comprised of sensations that are chemically activated (taste and smell), while another was comprised of mechanically activated sensations (touch and hearing). A third factor labeled suggestibility and social desirability was also found. Use of the scale needs to be made with the precise needs of the investigator in mind. The QMI is a scale of multisensory imagery, however it is often (improperly) used to predict performance on visual tasks.

Marks VVIQ. While the Betts QMI assesses imagery vividness as a multisensory construct, Marks Vividness of visual imagery Questionnaire (VVIQ) (Marks 1973) is designed to assess the vividness of visual images. Respondents use a five point scale to indicate the extent to which they can clearly visualize four variations on four familiar scenes. For example, one question asks respondents to visualize a shop they often frequent. Respondents imagine (1) the overall appearance of the shop from the opposite side of the road (2) a window display with individual items for sale (3) the color, shape and details of the door (4) images of entering the shop, going to the counter, having the salesperson's assistance and exchanging money. Marks (1973) originally advocated that respondents complete the scale twice, once with their eyes open and once with their eyes closed. However Dowling (1973) found that the 2 methods produced identical scores. The scale correlates significantly with the Betts QMI ($r=.55$; Rossi and Fingeret 1977), suggesting that both scales converge on the vividness dimension.

Gur and Hilgard (1975) believe the process of completing this scale is more interesting than the QMI. Moreover, questions for this test may generate more vivid images than questions for the Betts scale because they deal with familiar (and hence highly imageable) scenes. Questions also provide respondents with a richer set of cues which may make imagery more concrete and hence more vivid. On the other hand, because questions ask subjects to hold in mind and alter images in a sequential format, the scale may also tap different imagery ability construct; imagery control (Gur and Hilgard 1975). Thus, the discriminant validity of the scale may be problematic.

The high internal consistency of the VVIQ has been demonstrated repeatedly (McKelvie and Gingras 1974; Marks 1973; Rossi 1977; Dowling 1983; Childers, Houston and Heckler 1985) (see Table 1). Rossi (1977) conducted a principle component analysis on scale items and found that a single factor accounted for more than 50% of the variance. The test-retest reliability of the scale is adequate, although not high, with reported reliabilities ranging from .67 for 3 weeks to .73 for 7 weeks (McKelvie and Gingras 1974 and Rossi 1977, respectively). Interestingly, Rossi (1977) found that although test-retest reliability for the entire scale was .73, the coefficient increased to .86 when three items were removed. He suggests that the scale may be reliable for most items, but unreliable for a few. The scale has also been found to correlate moderately with the Crowne and Marlowe (1964) scale of social desirability (Childers, Houston and Heckler 1985).

Tests of Imagery Control

Imagery control refers to the extent to which one can

manipulate, transform, and hold images in mind at will. It is distinct from the vividness construct since one can presumably imagine stimuli vividly without being able to manipulate them at will (Richardson 1972). The control of imagery has been shown to influence a number of cognitive processes, including mental rotations (Ernest 1977, review), and performance on divergent thinking tasks (Forisha 1978). Gordon's test of Visual Imagery Control (VIC) is a frequently used measure of imagery control.

Gordon's Test of Visual Imagery Control. Gordon (1949) developed a 12 item scale assessing individuals' abilities to control their imagery. Respondents use a yes-no response format to indicate whether or not they can "see" various modifications on images of an automobile. For example, respondents are asked to picture a car standing at a garden gate. They are then asked to picture the same car lying upside down. Next they are asked to see the car running along a road. Twelve items constitute the scale. Due to problems inherent in the initial scale, Richardson (1969) developed a modified version, changing the response format from a 2 to a 3 point format and reducing the scale from 12 to 11 items.

The internal consistency of the VIC has been demonstrated repeatedly (see Table 1), and the test-retest reliability has been consistently found to be high. Westcott and Rosenstock (1976), however found relatively low reliability coefficients, and hypothesized that the scale may not be unidimensional. Most of the variance in imagery control is attributed to those items that relate to physical manipulation or movement (Morrison and White 1984). A new scale which focuses more specifically on these physical movement dimensions is likely to have a simpler, more coherent factor structure. Although few studies have examined the social desirability effects of the Gordon scale, a recent study by Childers et al (1985) found that the scale was uncorrelated ($r=.05$) with the Crowne and Marlowe (1964) social desirability scale. Empirically, the discriminant validity between the Gordon scale and the QMI has been demonstrated ($r=.22$, Morris and Gale 1974; $r=.36$, Starker 1974). However, the discriminant validity between the Gordon scale and the VVIQ is less clear. Childers, Houston and Heckler (1985) and McKelvie and Gingras (1974) both found that the Gordon scale was highly correlated with the VVIQ ($r=.56$, and $r=.67$, respectively). These results confirm Gur and Hilgard's (1975) hypothesis that the VVIQ taps both ability and control dimensions.

Tests of Processing Style

While the above scales were designed to assess individual differences in abilities to imagine, several scales have been designed to assess individual differences in individuals' preferences and propensities for using imagery. Paivio (1971) and Richardson (1978) hypothesize that individual differences exist in individuals' tendencies and preferences for processing information visually or verbally. Richardson (1978) conceptualizes a visualizer as one who prefers literal encoding (e.g., preferences for seeing, feeling physical features in relating information to prior knowledge), and one who uses daydreams or mental pictures as the accompaniment to thinking. A verbalizer is conceptualized as one who prefers linguistic encoding (e.g., reading how to do something), and one who uses inner speech as a conscious accompaniment to thinking. Processing style has also been found to influence recall and recognition of verbal and visual material (Hiscock 1976, Childers et al 1985).

The Visualizer/Verbalizer Questionnaire. Richardson (1977) developed a 15 item scale called the VVQ designed to differentiate verbalizers from visualizers. Respondents use a true-false format to indicate the extent to which visual vs. verbal processes are normally engaged in various activities. The questionnaire asks such questions as: "I enjoy doing work that requires the use of words" (verbalizer) and "my daydreams are sometimes so

vivid I feel as though I actually experience the scene" (visualizer).

Unfortunately, internal consistency of the scale is relatively low. Cronbach's alpha ranges from .54 to .66 (Childers, Houston and Heckler 1985). Childers, Houston and Heckler (1985) hypothesize that several factors may account for the low internal consistency. First, the visualizer/verbalizer construct is conceptualized as a preference and a propensity dimension (not an ability dimension), however the visualizer items more adequately measure ability than preference. The mixture of items relating to preference and ability makes the scale multi-dimensional, and reduces its internal consistency. Second, the true-false response format restricts variance of items which in turn influences the scale's reliability. Although only a few tests of the scale's test-retest reliability have been conducted, wide variations in stability are reported. Richardson (1977) reported test-retest reliabilities of .91 after 1 week. Warren and Good (1979), however, found test-retest to be quite low after 3 weeks, particularly for women ($r=.29$).

The Style of Processing Questionnaire. Recognizing the deficiencies inherent in the VVQ, Childers, Houston and Heckler (1985) developed a new measure of processing style, the Style of Processing Questionnaire (SOP). The 22 item questionnaire substantially modified VVQ visualizer items so that they more adequately reflect the preference dimension. In addition, the authors added a 4 point true-false response format. Items on this scale include such statements as: "I like to daydream," "I like to think of synonyms for words," and "I find it helps to think in terms of mental pictures when doing many things." Internal consistency of the scale was substantially improved over the VVQ (Cronbach's alpha = .81 to .86) (Childers, Houston and Heckler 1985). Moreover, a confirmatory factor analysis demonstrated the independence of visual and verbal components. The discriminant validity of the scale was also demonstrated, as the scale was shown to have zero correlations with tests of imagery vividness ($r=.01$ with VVIQ) and tests of imagery control ($r=-.03$ with VIC). In addition, correlations between the SOP and the (1964) Marlowe Crowne Social Desirability scale were negligible ($r=-.00$). Partial predictive validity of the scale was also demonstrated. Verbalizers had higher recall and recognition scores of advertisements ($r=.34$ and $.31$ respectively) compared to visualizers. Childers et al (1985) note that although one may score high on both visualizer and verbalizer dimensions, the term processing style is used to reflect a preference for one mode over the other. Thus one who scores either very high or very low on both dimensions has no preference for one mode over the other.

Tests of Daydreaming and Fantasy Content and Frequency

A final category of scales are general inventories of imagery content and frequency. These inventories measure a variety of constructs, including the vividness of daydreams and fantasies, the frequencies of daydreams and fantasies, and frequency, emotional involvement in imagery, and control over daydreams. Hence they have subscales which tap both vividness and control dimensions, as well as more general imagery content.

Wilson-Barber Inventory. Wilson and Barber (1978; 1983) developed a series of interview questions designed to assess imaginative involvement in fantasy. A modified version of the inventory was developed by Myers (1983) and is geared specifically for children and adolescents. Using a yes-no format, individuals indicate the extent to which they experience fantasies and feeling-related fantasies. Items assess both current imaginal experiences as well as childhood experiences. Using a large sample ($N=1337$) Myers (1983) found internal consistency of the inventory to be .89. Test-retest reliability for a subset of the sample was also found to be high ($r=.87$; $N=104$), however the period between testing was relatively short (5 hours to 1 week). An exploratory factor analysis, yielded a

complex factor solution. Fourteen factors were identified from the inventory. These include "living in a make believe world," "vivid pretending," "vivid memories," and "mental adventures." Many of the factors identified by this inventory may be relevant for identifying individuals who enjoy fantasy imagery through engaging in hedonic consumption activities. However, the extremely complex factor structure of this relatively small inventory suggests that further refinements are needed. Caution must also be exercised in assessing the validity of the inventory. Specifically it is not clear whether respondents, particularly children, can accurately and adequately report on inner experiences from their past.

The Imaginal Process Inventory. Several general inventories assess individual differences in a more specific part of imagery; daydreaming. Daydreaming is conceptualized as spontaneous and often task-irrelevant inner dialogue involving multisensory images. The content of these inner dialogues often reflect "current concerns" or "unfinished business." Singer and Antrobus (1963) developed a massive 344 item inventory (29 subscales) designed to assess individual differences in daydreaming content, frequency, vividness, controllability, and general feelings about daydreaming. A modified version of the scale was developed by Singer and Antrobus (1972). A shortened version containing 45 items (7 subscales) was developed by Huba et al 1982. Internal consistencies for the scales are generally quite good, with mean internal consistency scores approximately .81. Test-retest reliabilities are also adequate (Cundiff and Gold 1979) (See Table 1).

The initial IPI was designed to relate individual differences in daydreaming to individual differences in personality. Three "types" of individuals have consistently been identified using IPI and personality measures: (1) a positive vivid daydreamer (2) a guilty-dysphoric daydreamer and (3) a mindwandering, highly distractible daydreamer. The latter two types indicate a psychologically maladaptive personality type (Singer and Antrobus 1972). The majority of adults studied report engaging in some sort of daydreaming every day and most of these are classified as positive-vivid daydreamers (Singer & McGaven 1961). Positive vivid daydreamers most frequently report daydreams of the future (anticipatory imagery), positive reactions to daydreams, visual imagery, and sexual daydreams. Daydreaming frequency and content change across the lifespan, (Giambra 1977). Sexual and anticipatory daydreams are greatest in the early years of adulthood, while daydreams related to past memories predominate as people age.

An interesting and untapped dimension of daydreaming in a consumption context is the use of anticipatory imagery. According to Singer and Antrobus, anticipation of the future is an important and prevalent dimension of daydreaming for many adults. The extent to which anticipation of the future includes consumption experiences is unknown. Moreover, little is known about the types of marketing stimuli most likely to produce daydreams. An interesting extension the choice literature is the study of daydreaming patterns in solving consumption problems. Imagery of this sort represents a form of spontaneous, internal search, perhaps accompanied by emotional experiences.

The Imagery Processing Scale. While the IPI has properties that make it a useful inventory for studying daydreaming, it may be less useful in a consumer context since it was initially developed to assess both normal and pathological functioning. MacInnis (1985) developed an inventory designed to measure imagery and daydreaming more specific to a consumer context. The Imagery Processing Scale is a 45 item inventory modified and extended from the IPI. The inventory assesses the use of fantasy imagery in owning products and experiencing events, the use of anticipatory imagery, the use of imagery as a

substitute for consumption experiences, the vividness of imagery, the use of imagery to solve problems, the use of imagery in reducing needs for stimulation, and the perceived general utility of imagery. Items include, "I like to read and daydream about exciting vacations even though I'll probably never take them." "Compared to most people I believe my dreams and fantasies are much more vivid," "I sometimes dream about owning a lot of expensive things and imagine all the status they would give me," "I often daydream about all the great things I am going to buy in the future." Respondents use a 1-7 point scale to indicate their level of agreement with each statement.

MacInnis (1985) found internal consistency reliability for individual scales of the inventory to be relatively high (Cronbach's alpha ranges from .71 to .89 in two studies). Partial predictive validity of the scale was established using a scale of optimum simulation level, delay of gratification, and risk taking as criteria.

Discussion

Many of the scales and inventories reviewed here have adequate psychometric properties. However, several factors should be considered when using these scales in a consumer behavior context. First, most were designed to assess general imagery processes. The use of these scales to predict specific consumer behaviors requires careful consideration. Relatedly, state characteristics may have an equal or greater influence in imagery processing than trait characteristics in some consumption contexts. For example, an individual with a highly integrated, well developed knowledge base for a specific consumption domain may be able to generate more vivid imagery for that domain than another individual, despite the fact that both have equivalent scores on a general imagery vividness scale. In sum, the results presented here provide preliminary, not confirmatory evidence for the construct validity of these scales in a consumption context.

These precautions should not, however, discourage the use of these individual difference scales in a consumption context. Several studies have demonstrated that these individual difference variables have a main and moderating effect on the processing of consumption-related information (Childers and Houston 1984; Childers et al 1985, Rossiter and Percy 1978). Moreover, important and interesting questions can be raised about the effects of various combinations of imagery ability, processing style and content on consumption outcomes. For example, individuals with vivid, controllable imagery oriented toward the future may make considerable use of imagery in planning purchases; using imagery as a mode of visual problem solving in selecting among product alternatives. Those with vivid imagery oriented toward the past may be able to prolong the pleasure of post consumption activities. Understanding how individual differences in imagery processing interact, influence, and moderate information processes represents an important direction for future research on imagery.

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COMPUTER-ASSISTED PRINT AD EVALUATION

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Abstract

The evaluation of advertising effectiveness and its determinants has long been a concern of advertisers and advertising agencies. This paper reviews the limitations of past research on this topic and describes a computerized ad testing procedure which allows precise estimates of the effects of print ad characteristics, environmental or contextual factors, and their interaction.

Advertising Effectiveness Research

Advertising researchers have investigated the relationship between various print ad characteristics and measures of advertising effectiveness for nearly 70 years. A wide variety of mechanical and content characteristics have been considered. The mechanical aspects include ad size, number of colors, proportion of illustrations to copy, the absence of borders (bleed), and type size (Diamond 1968; Holbrook and Lehmann 1980; Valiente 1973). The content factors include message appeal (e.g., status, quality, fear, and fantasy; Holbrook and Lehmann 1980), attention-getting techniques (e.g., free offers, pointers, and women; Hanssens and Weitz 1980), and psycholinguistic variables (e.g., product or personal reference in headline, interrogative or imperative headline; Rossiter 1981), among others.

The research cited above has provided a number of insights into the effects of executional factors on print ad performance (see the review by Percy 1983). However, several methodological limitations plague most of these studies. First, they tend to define "advertising effectiveness" in terms of just one or two measures such as ad recognition, recall, or inquiry generation. They have not examined advertising effectiveness in a thorough, multidimensional manner, involving constructs spanning the entire communication and decision process (i.e., exposure, attention, interest, comprehension, beliefs, preference, and choice). Without such a complete assessment, the value of the research results for advertising design decisions is extremely limited. This is a relevant concern given that various aspects of consumer response involve quite different psychological processes of memory and information processing which can be differentially affected by the various ad factors (cf. McGuire's, 1978, discussion of the "compensation postulate").

Second, the majority of print advertising effectiveness studies have used data from commercial organizations which measure consumer responses to ads that have actually appeared in various magazines. As such, ad characteristics are confounded with uncontrolled and unmeasured contextual factors (e.g., type of magazine, time and place of exposure, product relevance to the consumer) so it is difficult to evaluate the separate effects of these characteristics on effectiveness. Only a few studies have employed laboratory testing procedures which control for these "threats" to internal validity.

Third, most of the research methodologies which utilize a dependent variable (effectiveness)/independent variables (print ad characteristics) scenario employing multiple regression, AID, etc., suffer from problems of structural multicollinearity in the set of independent variables measured (e.g., Diamond 1968; Assael, Kofron, and Burgi 1967). Because these measurements are extracted mainly from actual print ads, there is no control over the mechanical and content characteristics and their

interrelationships. For example, the total size of the ad may be correlated with the number of words of copy. Therefore, precise main effect estimates of each independent variable's contribution to print ad effectiveness are impossible. In some cases, researchers have used factor analysis to reduce the set of ad characteristics to a smaller, uncorrelated set of variables. The factor scores are then related to effectiveness (e.g., Moldovan 1985; Twedt 1952; Valiente 1973). However, effectiveness weightings for the derived factors cannot be used to predict the performance of new ads which are described in terms of the original set of correlated dimensions.

Finally, these studies typically use ads that are already at the final stages in testing, and are therefore likely to evoke favorable responses. Consequently, there may be relatively little variation in some important ad characteristics (cf. Stewart and Furse 1986). For example, advertisers may not use certain ad formats with product categories that are known to be incompatible. Therefore, the data analysis will not reveal the true interactive effect of format and product category on ad effectiveness.

Computerized Ad Generation and Testing

An alternative approach is to experimentally manipulate print ad characteristics and measure consumer responses in a laboratory setting (e.g., Mitchell 1986; Petty, Cacioppo, and Schumann 1983). This gives the researcher flexible control over the composition and presentation of ads, overcoming many of the limitations noted above. Unfortunately, the production of stimulus materials for advertising experiments is typically costly and time consuming, restricting the scope of experiments to the investigation of just a few ad factors.

We have developed a computerized procedure for the generation and testing of print advertisements which avoids the high production costs and time required to physically prepare materials for advertising experiments and allows the measurement of a broad range of consumer responses. This methodology permits precise control over stimulus material presentation, can perform automatic randomization or counterbalancing of non-experimental factors, and allows unobtrusive measurement of ad exposure times and information acquisition behavior. Subjects' responses are automatically coded and stored by the computer.

This procedure has evolved from methodology which is widely used in cognitive and social psychological research. For example, Ronis, Baumgardner, Leippe, Cacioppo, and Greenwald (1977) report on a computer-controlled system for studying the persuasiveness of verbal stimuli. Their time-sharing computer system sequentially presents messages (from a library of persuasive communications) on a video display and records opinions according to a Latin square design. This standardizes the experimental procedure, minimizes the interaction between the subject and human experimenter, and allows within-subjects estimates of the main effects of manipulations. Similar procedures have been used in marketing contexts to measure the impact of competitive advertising and information processing objectives on consumer memory for advertisements (Burke and Srull 1985), and to study the effects of various advertising claims on message comprehension, brand-attribute beliefs, and evaluation (Burke, DeSarbo, Oliver, and Robertson 1986).

Computer Implementation

A combination of hardware (IBM PC/AT microcomputer, AT&T Targa graphics controller, Sony analog RGB monitor) and software is used to create an "electronic magazine" on a video display, where computer-generated print ads are combined with articles and other editorial material. The illustrations and other visual elements (e.g., logos, trademarks) which appear in the experimental ads can come from existing photographs, print ads, or television commercials, and are scanned into the computer using a video digitizer or "frame grabber" (see Robertson, 1986, for product information). A graphics editor is then used to combine the images, headlines, and body copy in standard ad layouts (Book and Schick 1984). The exact size and content of the ads depend on the specific ad factors under investigation.

Experimental Design

Consumers differ substantially in terms of their prior knowledge, preference for alternatives, personality, etc., and these variables can affect their responsiveness to advertising (e.g., Buchanan 1964). When the subject variance is high, a within-subjects design is required to have sufficient statistical power to detect modest effects. However, if a completely within-subjects design is used in an advertising experiment, it creates a rather unnatural magazine, where a number of different ads in a variety of formats appear for the same brand of product.

It is therefore desirable to use a Latin square or confounded block design (Kirk 1968; Winer 1971) in which ad characteristics are manipulated across a set of ads for different brands appearing in different locations in a single magazine. Across subjects, the magazine contains different pairings of brands, ad characteristics, and locations. This permits the computation of within-subject estimates of the main effects of ad factors, brands, and locations, and can also provide partial information on their interactions. When advertising studies have used designs allowing the measurement of interactions, these effects are often found to be significant (see, e.g., Edell and Staelin 1983; Petty, Cacioppo, and Schumann 1983).

The computer procedure allows the investigation of a number of user-specified mechanical and content characteristics mentioned previously. In addition, contextual and process variables can be studied, including the recency and frequency of ad exposure, level and nature of competitive advertising, clutter (e.g., total volume of advertising, ad-to-editorial ratio), ad placement, and editorial context. The effects of alternative headlines, brand claims, and illustrations can also be tested if the experimental ads are for brands from the same product class.

Procedure

Subjects are asked to participate in a research study to investigate how individuals react to the electronic distribution of magazines through computers (cf. Ray and Sawyer 1971). After completing a computer-administered questionnaire containing questions on demographics, magazine readership, product familiarity and usage, and attitudes towards computer usage, the subject is asked to browse through a magazine displayed on the computer screen as if it were an ordinary print magazine. The "Page Up" and "Page Down" keys of the computer keyboard are used to turn pages. "Home" turns to the cover of the magazine, "End" turns to the back page, and "Escape" leaves the magazine. The page presentation rate and exposure sequence is controlled by the viewer.

Within the magazine, color and black and white print ads appear for a variety of different products and brands. Articles, excerpted from general-interest magazines, are interleaved with the ads. During the magazine review period, measures of ad exposure time, page exposure frequency, and the recency of exposure are unobtrusively

recorded. After the subject has finished browsing through the electronic magazine, he/she is asked to complete a "Magazine Evaluation Questionnaire." Following this interpolated task, subjects are asked a number of questions about the experimental ads including brand name recognition, brand-attribute recall, ad comprehension, brand beliefs, liking, and preference.

Analysis

A multivariate analysis of variance is first conducted to examine consumers' overall responsiveness to the manipulation of ad characteristics. This is followed by univariate analyses for each of the dependent variables. Clearly, the goals of print ads differ (e.g., creating brand recognition, communicating information, stimulating interest, etc.), and it is necessary for the advertiser to identify the impact of ad characteristics on those responses which are most relevant to the current goals.

The estimated model allows for the determination of "optimal print advertisements" from the perspective of maximizing one or more (e.g., a convex combination) of the various dependent measures (cf. Diamond 1968). As in traditional conjoint analysis, simulators can be constructed to evaluate other print ads not utilized in the design. This methodological schema can be seen as input to a potential expert system for print advertisement design.

Limitations and Future Directions

While this approach circumvents many of the internal validity problems of past research, it raises a complementary set of questions about external validity. Subjects find the computerized procedure novel and interesting, and are presumably highly involved in the task. Print has often been characterized as a comparatively "high involvement" medium (Krugman 1965, 1977), so one might expect the levels of ad attention in the laboratory to be similar to those for ads appearing in real magazines or newspapers.

However, individuals in the laboratory setting are aware that their behavior is being monitored. Thus, they may attend to a greater proportion of ads, attempt to memorize the materials, or behave in other "unnatural" ways in response to perceived demand characteristics. Furthermore, individuals can flip through the pages of a real magazine, tear out ads and articles, put the magazine on a coffee table and return to it in a few days, etc. In order to explore the effects of these differences on the external validity of findings from the computer procedure, it will be necessary to compare these results with data collected in more naturalistic exposure situations. For example, laboratory data on the effectiveness of individual ad characteristics can be used to predict the performance of advertisements which have been field-tested by commercial services.

Another limitation of the computer testing approach is that it requires a computer workstation for each subject to be run concurrently. An alternative approach is to generate printed output using a thermal or inkjet printer or color film recorder for group-administered paper-and-pencil studies. This allows the researcher to run a number of subjects simultaneously. However, it becomes much more difficult to collect the process measures of ad exposure time, frequency, and page sequence.

If the researcher is interested in studying the effects of a large number of ad characteristics and their interaction with subject variables, then it may be desirable to use a completely within-subjects design (as with conjoint analysis). Of course, if subjects are shown a large number of product advertisements that vary only slightly, then brand beliefs and evaluations should be measured at the time of ad exposure, rather than at the end of the exposure sequence, to reduce the possible confusion between ads. If individual difference variables are found to interact with executional variables, this would suggest

that ads might be tailored to the response functions of specific market subsegments.

With the recent availability of low-cost, high-resolution graphics equipment, computerized experimentation will undoubtedly see broader application in marketing research. For example, Reiling (1986) describes a system for the design and evaluation of product packaging. Packaging graphics are first laid out on a graphics workstation, modeled in three dimensions, and then displayed on a simulated store shelf among competitive products. At this point, the package is tested on visibility, apparent size, and the visual dominance of graphic elements. The same methodology could be used for examining consumers' responses to a variety of visual stimuli, including point-of-purchase displays, sale signs, shelf cards, shelf "frontage," and sales people.

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AN INTEGRATIVE APPROACH TO CONSUMER CHOICE¹

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Abstract

Although apparently treated so by the modelers of the two schools, the cognitive-rational and hedonic aspects of choice are not two mutually exclusive elements in consumers' scheme of things. This paper views the two aspects as forming two distinct but consecutive stages of the consumer choice process, differing in terms of their purpose, nature of process, and criteria, as well as relative dominance in a given situation. The discussion concludes with the proposal of an integrative framework.

Introduction

While the study of consumer behavior began to attract the serious attention of scholars as early as 1920's, when the formalization of the marketing discipline and growing interest in advertising research discovered the relevance of consumer behavior, major strides were made during the post-World War II boom in the American economy, when the constraint shifted from supply to demand, and the spotlight from the factory onto the marketplace. The study of consumer behavior owes its progress to scholars from a variety of disciplines---economists, decision theorists, cognitive and social psychologists, and phenomenologists. Each group brought the theoretical and methodological orientations of its fundamental discipline to the task, and such chose areas of consumer research most amenable to them. One consequence of this has been that consumer behavior research today has well-developed sub-areas of knowledge which are not always congruent or synergistic.

This paper attempts to look at some aspects of consumer choice process with a view to developing a more basic and integral view of the phenomenon than is prevalent today. The objective is not so much to synthesize the various theoretical approaches, as to evolve a more general, and hopefully better, understanding of consumer choice process.

The paper discusses some of the key constructs employed in the various approaches to consumer choice, attempts to integrate some of the more recent findings into a framework, and advances a general model of consumer evaluation and choice process.

Consumer Behavior As Problem Solving

This refers to the currently popular, information processing approach to consumer behavior theory. Here the consumer is viewed as a 'thinker' who goes about solving his consumption problems in a 'rational' and analytical way. The models with this approach have been termed 'cognitive-rational' models because the process is viewed as being i) goal-directed, ii) calculated, and iii) predicated upon some knowledge of costs and benefits of alternative choice (Paul Peter and Tarpey 1975). Central to this paradigm are the concepts of perceived return and perceived risks.

Perceived Return

The concept of perceived return is inherent in the economists' assumption of consumers acting to maximize utility subject to resources constraints. To the rational consumers of the economists' model, utility flowed chiefly through the functional benefits of the performance attributes of a product. The unrealistically

restrictive nature of this assumptions was highlighted when Veblen (1899) presented his theory on the social aspects of consumption. The possibility of a third class of benefits, in addition to the functional and social benefits, was postulated when in 1923, Copeland attempted to classify consumer goods on the basis of the rational and/or emotional motives (Horton 1984, p. 7-8).

Today the consumer researchers acknowledge the role of functional, social, and personal psychological benefits, although most models do not deal with all of them.

Perceived Risk

With the increasing complexity of the economic society, consumption decisions have to be made under greater degrees of uncertainty, and there is an ever-increasing demand on people's skills as consumers. Thus, before they can derive the benefits of consumption of goods, they have to successfully go through a process beset with risk. This risk relates not merely to the uncertainty of the desired outcomes, but the possibility of potentially negative outcomes (Bauer 1967). Further, the uncertainty may not necessarily relate only to the characteristics of the alternatives the consumer faces, but also to his or her buying goals themselves (Moller 1979).

It is obvious that the perceived risk will affect the consumer strategy and that risk reduction has become a major objective of the choice process in the increasing complex consuming environment.

Bounded Rationality

While the concept of perceived risk highlights the 'demand' made on the consumer due to environmental complexity, the concept of bounded rationality focuses on the 'constraint' aspects. Advanced in 1958 (March and Simon 1958), the concept argues that consumers do act rationally when viewed realistically in the light of the constraints.

The first constraint relates to the complexity of the task itself; while a limited amount of complexity is not only tolerated but indeed preferred by the consumer since it adds to the 'fun' aspect of consumption (this will be referred to later), a high level of complexity is very unsettling and produces an unpleasant psychological state in the consumer (Berkowitz 1969).

The second constraint relates to the ability of the consumer to cope with the complexity of the task. The limitations of the cognitive capabilities of consumers have been dramatically highlighted in the last few decades, when path-breaking technologies have offered the consumers a variety of products which require, for their choice as well as use, advanced cognitive capabilities on the part of the consumer--despite the extension of cognitive capabilities by products like computers (that the very use of computers today requires the consumers to perform intricate cognitive gymnastics is another matter!)

The third constraint relates to the profitability of the task; more than ever before, consumers have less discretionary time to spend on consumption decisions and more such decisions to make. Stigler's economics of information theory (Stigler 1961) argues that the consumer will weigh the cost of additional information (in terms of time, money, effort, and delayed consumption) against the value to him, of such information. In fact, McCall (1977) has gone so far as to suggest that "convenience may replace price in economic theory".

¹The author wishes to thank Terry Elrod for helpful suggestions.

The value of information in the light of consumers' inclination and cognitive limitations to use it, often seems to be pretty low. In his review of consumer external search, Newman (1977) found little evidence of external search of an extensive nature. The amount of search was very low for an overwhelming proportion of consumers, even for the so-called 'high-involvement' purchases like major appliances.

As a result of such findings, the consumer has increasingly been viewed as trying to satiate rather than maximize utility in consumption decisions.

Consumer Behavior as Hedonic Consumption

This paradigm views the consumer as a 'feeler', who consumes products for certain abstract, intangible, esthetic, symbolic, and hedonic benefits, through a process very different from the one used in the cognitive-rational model.

While sustained and widespread interest in this paradigm is of recent origin, the fact that consumers care for something more than the 'dry' utilitarian, functional benefits has been known for a long time. Copeland's 1923 classification of consumption motives into 'rational' and 'emotional' is recognition of this fact (Horton 1984, p. 8). Among the emotional motives mentioned by Copeland are "Expression of artistic taste", "Happy selection of gifts", "Romantic instincts," "Pleasing sense of taste", and "Pleasure of recreation." In the late forties, and fifties, Dichter and other motivation researchers approached the ultra-utilitarian reasons for consumption from a Freudian, psychoanalytic standpoint (Dichter 1964). In the late fifties and sixties, some valuable contributions were made in the area of product symbolism (Levy 1959, 1963). In the late seventies and eighties, there have been serious efforts to formalize the paradigm, although it is still in the formulative stages; "concepts are loosely defined and/or inconsistently operationalized, research postures are predominantly descriptive, and results have not been organized into a cohesive paradigm" (Hirschman 1981).

The hedonic paradigm differs from the cognitive-rational paradigm along two basic dimensions; it portrays the consumer as looking for benefits qualitatively distinct from the utilitarian, functional ones, through a process fundamentally different from the linear-analytic process of the cognitive-rational paradigm.

Hedonic Benefits

While the utilitarian benefits refer to the functional relationship of the consumer with the product, the hedonic benefits refer to the personal psychological relationship. These benefits range from hedonic (pleasure, fun) and esthetic (beauty) to emotional (happiness, surprise, poignancy) and symbolic (self-identity, self-exploration, self-expression). Ahtola (1985) attempts to distinguish between utilitarian and hedonic aspects of attitude toward a behavior, where "utilitarian aspects...relate to usefulness, value, and wisdom of the behavior as perceived by the consumer. Hedonic aspect relates to pleasure anticipated from the behavior". A more general distinction in terms of functional usefulness vis-a-vis psychological significance of a product, is made by Holbrook (1983) by pointing out "...utilitarian (extrinsic) value tends to result from belief about the way product imagery serves consumption needs whereas esthetic (intrinsic) value tends to hinge on an emotional response to the sign or significant appreciated for its own "sake".

Hedonic Process

The polarization between the two paradigms discussed is at its sharpest in the process aspect. Here we refer to the consumption choice process in addition to the consumption process itself. While the cognitive-rational modelers assume a deliberate, rational, linear,

analytical, and essentially cognitive process on the part of the consumer, the hedonic paradigm postulates a spontaneous, emotional, simultaneous, and holistic consumer process which is an integral part of the consumption experience itself. Hirschman (1982) defines hedonic consumption as it refers to "... consumers' multisensory images, fantasies and emotional arousal. Hansen (1982), approaches the same issue from findings in the area of brain research, notes that "... most models of consumer behavior imply brain functioning normally associated with the left brain ... Several misunderstood aspects of consumer behavior can be explained making the use of recent findings on the functioning of the right brain".

In summary, "a growing body of evidence suggests that sensory-emotive stimulation seeking and cognitive information seeking are two independent dimensions", (Hirschman 1982). But, as with cognitive-rational modelers, the hedonic consumption researchers have chosen for investigation, areas of consumption most amenable to their philosophy and methodology, such as the performing arts, the plastic arts, and popular culture products--thus avoiding any overlap with the bailiwick of the cognitive-rational school. This may partly be because the above-mentioned products, exhibiting a high level of 'purity' in terms of their hedonic benefits and process contents, render their study particularly profitable to an incipient and inchoate paradigm.

Consumer Choice as a Multistage Process

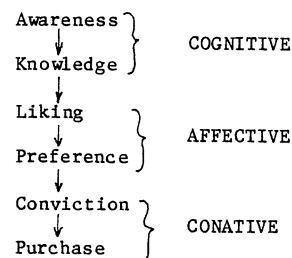
A different aspect of the consumer choice issue relates to the series of mental stages that the consumer is thought to go through in arriving at a purchase decision. Two approaches are found in the literature with respect to this issue.

Hierarchy of Effects

Lavidge and Steiner (1961) proposed that consumers go through a series of stages as shown in Fig. 1. The six steps can be conveniently viewed as being made up of three basic psychological processes: cognitive, affective, and conative (Horton 1984, p. 57).

FIGURE 1

LAVIDGE AND STEINER'S MODEL



Ray (1973) developed this model further, and proposed that consumers use one of three decisions hierarchies based on the above model (differing only in sequence) depending on the buying situation.

Phased Decision Strategy

The cognitive-rational models too, found it necessary to view the consumer choice process as consisting of more than a single stage. Their rationale, however was one of processing efficiency. Lussier and Olshavsky (1979) found that "brand choice strategy is contingent upon task complexity. When three brands were presented, subjects first eliminated unacceptable alternatives and then evaluated the remaining alternatives by a compensatory process".

The use of an eliminative rule such as conjunctive rule in order to reduce task complexity as well as perceived

risk and to come up with a set of 'good' alternatives for further consideration has been consistently supported in the literature (Wright and Barber 1977, Tversky and Kahneman 1981, Grether and Wilde 1984).

An Integrative Framework of Consumer Choice Process

From the foregoing it can be seen that while cognitive-rational models have concentrated on products such as detergent, breakfast cereal, TV and washing machine, the hedonic school preferentially study rock concerts, modern dance, historic romance novels, and high fashion products (Mizerky and Mullet 1981, Lapso 1981, Schiffman and Schnarrs 1981). The former group, by ignoring the symbolic aspects of consumption even when they studied products such as automobiles, and the latter, by severely restricting the range of products studied, have tended to give implicit support to the view that the two paradigms are mutually exclusive as they depict the consumer choice process. But it is known that all consumer behavior does contain some symbolic component (Holbrook 1981).

The issue can be conveniently tackled by using a framework such as the one presented in Fig. 2.

FIGURE 2

ELEMENTS OF CHOICE PROCESS: A FRAMEWORK

	Process	Outcome
Undesirable	Complexity of an unmanageable proportion Frustration Feeling of Inadequacy	Perceived Risk
Desirable	Joy of buying (hedonic process) Joy of thinking (need for cognition- (Cacioppo and Perry 1982)	Perceived Return i) utilitarian benefits (extrinsic) ii) Hedonic (intrinsic) benefits

The framework distinguishes between the process and outcome aspects of consumer choice. The consumer is hampered in this quest for the process and outcome benefits by the perceived risk and is often daunted and frustrated by the complexity of the process he must go through to make a wise choice. Note that, unlike with outcome, the distinction between the desirable and undesirable aspects (benefits and disbenefits) of the process is not clear cut.

Given such a framework it is easy to see that each buying situation represents a different equilibrium of these elements. While instances of a predominantly cognitive process have been extensively studied and need no repetition, increasing attention is being paid to buying situations where the emotive aspect dominates. According to Maslow, in some instances, "emotional desires dominate utilitarian motives in the choice of products" (Hirschman 1982). Hansen (1981) notes that "the consumer is not interested in the substantial properties such as ingredients contained in soup or vermicelli. In general, he will rely upon the fact that the soup purchased comes up to a normal standard of quality, and his attitude is influenced only very little by means of product-specific information and the cognitive attitudinal component ... In these areas, the evaluation of the product is more likely to be controlled by emotional appeals". Hirschman (1981) states that the "The symbolic meaning of a product may, in some product classes, overcome or dominate its technical performance as a determinant of consumption ... (in) such diverse products as automobiles, apparel, home furnishings, educational institutions, hairstyle, and leisure time activities". Ahtola (1985) found, in his experiments, that sometimes hedonic aspects dominates ("eating a candy") and sometimes utilitarian aspect

dominates ("doing laundry"). Weinberg and Gottwald (1982), investigating impulse purchases, found that "information processing plays a part in the buying decision. But, despite the possibility of later justification of the buying behavior, its influence is smaller than that of emotional engagement".

In this context, it is highly interesting to note that Fishbein's earlier version of the extended model conceptualized three determinants of behavioral intentions, viz. i) attitude toward behavior, ii) social norms, iii) personal norms. Later, he dropped the third factor because it correlated too high with behavioral intention without adding to the predictive power (Fishbein and Ajzen 1975). It is possible that the holistic nature of the process that handles personal psychological variables has rendered the use of such variables in a multiattribute, compositional model ineffective and somewhat tautologous.

Determinants of Dominance

If it is true that both cognitive-rational and hedonic aspects influence the choice process in most situations, the difference being in their relative dominance, the next logical question to ask would be what are the factors which determine this dominance. The framework considers three determinants, viz. i) Product variable, ii) Personality variable, iii) Context variable.

Product: This is a rather obvious determinant in that it has, as was previously mentioned, provided the basis for the differing areas of research for the two paradigms. In fact, Hirschman and Holbrook (1982b) classify products into utilitarian and esthetic.

Following the proposed framework, Fig. 3 looks at the product variable along the two dimensions.

FIGURE 3

DETERMINANTS OF DOMINANCE: PRODUCT		Hedonic Aspects	
		High	Low
Utilitarian Aspects	High	Complex Goods (Automobiles, Spouse choice, Job choice, Healthcare Decisions)	Industrial Goods Rational Goods (Insurance, Encyclopedia)
	Low	Impulse Goods Art/Culture Goods Sports (watching)	Low Involvement Goods

Two points are worth noting. The first is the high emotive content and the low cognitive control that mark the impulse good category and the reverse in case of rational goods. In his study of consuming impulses, Rook (1985) notes that "Impulses are action-oriented; they trigger responses quite quickly". The absence of such high emotive content in rational goods is noteworthy. Books on personal selling mention insurance and encyclopedia as two products which should sell themselves on the basis of their rational utility, but are probably the more difficult products to sell. It is also interesting in this context to see that insurance companies use promotional themes that are high on sentimental and emotional aspects, in order to trigger action.

The other point relates to the complex goods which are high on both utilitarian and hedonic aspects. How the consumers work out their needs along two different dimensions involving different dynamics should be of interest to consumer researchers.

Personality: It is also reasonable to expect some

individuals to be more hedonically oriented than others and still others more predisposed toward the cognitive-rational process. For instance, impulse buyers assess themselves as being more emotionalized than others (Weinberg and Gottwald 1982), while some people have a much greater need for cognition than others (Cacioppo and Petty 1982).

More recently, Venkatraman and MacInnes (1985) investigated 'hedonic' and 'cognitive' consumers on their epistemic and sensory exploratory behaviors and on that basis classified consumers as Experience Seekers, Experience Avoiders, Hedonic Individuals, and Cognitive Individuals. Fig. 4 is a schematic adaptation of their findings.

FIGURE 4

DETERMINANTS OF DOMINANCE: PERSONALITY

		Hedonic Orientation	
		High	Low
Epistemic Orientation	High	Experience 'seekers'	Cognitive individuals
	Low	Hedonic individuals	Experience avoiders

Context: Apart from product and personality variables, the context of consumption may also influence the relative importance of the cognitive-rational and hedonic dimensions. Imagine a consumer buying a camera i) in his or her capacity as a photographer in the art department of a company, ii) for his or her personal use as a hobbyist and, iii) as a gift for a loved one. The relative dominance of the two dimensions will be very different in each case. Hansen (1981), too, considers this aspect in his study of hemispherical lateralization in relation to consumer behavior. "An important methodological question is whether relative hemispherical dominance is an individual trait ... or is situational, in that different informational inputs lead to more or less dominating left- or right-brain processes. Hansen (1977) proposes that consumers can make choices in very different ways depending on situational factors and on the nature of the problem" (Hansen 1981).

FIGURE 5

DETERMINANTS OF DOMINANCE: CONTEXT

		Hedonic Aspects	
		High	Low
Cognitive-rational Aspects	High	Situations of high emotional involvement and high social and performance risk (first home or car?)	Industrial buying
	Low	Vacationing, Sentimental occasions, Gift giving	Routinized response situations

Fig. 5 attempts to capture the context effect. Thaler (1985) refers to an example of a person who would not buy an object he feels is attractive but extravagant, but will gladly accept it as a birthday present from his wife, the money in both cases having come from their joint account. The present framework explains this by the context effect, where the first situation is a cognitive-rational dominant one while gift-giving operates primarily in the affective mode. Thaler (1985) notes the similarity between gift-giving and buyer behavior during vacationing, which, according to this framework, due to the dominance of the hedonic aspects.

A Model of Consumer Evaluation and Choice

This section presents a model of consumer evaluation and choice, in the light of the foregoing discussion. The

effort is largely speculative and no attempt is made in this paper to test the model.

Central Concepts

The following is a brief discussion of the concepts advanced, which provide the foundation for the model.

Concept of Process Benefits: These refer not only to the 'joy of buying' and the 'fulfillment of the need for cognition', which are experiences sought by the consumer for their own value apart from the outcome benefits of consumption, but also to the disbenefits such as frustration, confusion, feeling of inadequacy, anxiety, fear of loss or disapproval, and torment. The process benefits are important in themselves but even more interesting for their possible impact on the process and thus, the choice made. This distinction has been referred to in the literature variously as buying vs. consuming, choosing vs. using, and purchase vs. product involvement (Holbrook, Chestnut, Oliva, and Greenleaf 1984).

Arousal theory of motivation postulates that an organism seeks to maintain an optimum level of arousal and seeks small, pleasurable ups and downs in the form of stimuli which are moderately uncertain, novel, complex, surprising and changing (Berkowitz 1968). Consumers have described their impulse buying urges as "feeling like 'hungers', 'tingling', 'seem almost physical'." They use terms such as exciting, risky, a 'surge', fun, naughty, great, happy, exhilarating, satisfying, and compelling" (Rook 1985).

It must be noted that this 'fun' aspect of consumption is severely hampered by perceived risk which generates anxiety. Hence the 'fun' aspect of buying is exemplified most in children, who are largely risk-oblivious. Thus risk reduction is often a precondition for "joy of buying" to operate.

Concept of Reducible Risk: When faced with a perceived risk in a complex consumption environment, the consumer attempts to reduce the perceived risk by processing relevant information, when he feels such a step is feasible. But, when he perceives the situation to be too complex or the risk too high to cope with, i.e. when the perceived risk is largely 'non-reducible', he resorts to exogenous methods of choice (such as buying the famous brand or the brand his or her friends have etc.) to reduce the risk. The reducibility of risk would again depend on the product, personality, and context variables.

Concept of Sequential Play of Cognitive and Emotive Processes: Following Lavidge and Steiner's cognitive-affective-conative sequence, it is proposed that the cognitive risk reduction occurs prior to the emotive stage. Following up on the child example in an earlier paragraph, we can metaphorically say that the 'adult' in the consumer operates first to reduce perceived risk before letting the 'child' in the consumer play in a relatively risk-free environment. Fig. 6 gives a summary of the two stages.

FIGURE 6

CHARACTERISTICS OF COGNITIVE AND EMOTIVE STAGES

	Cognitive Stage	Emotive Stage
Purpose	Risk Reduction	Final Choice
Process	Analytical	Holistic
Decision Rule	Elimination (e.g., Conjunctive)	Positive holistic response
Critical	Major performance and social variables	Personal psychological, symbolic variables

Concept of Differing Criteria for the Two Stages: It is important to note that not only the nature of the process involved in the two stages is different but the criteria are different too. One reason is the satisfying approach usually taken by the consumer with respect to risk reduction variables (performance, functional variables).

Secondly, at the end of the first stage, the performance variables have much less diagnostic value having generated a set of alternative that are 'adequate' on these criteria. Dawes defines the conjunctive choice rule with respect to personnel selection as "a selection procedure ... in which an individual is evaluated in his least relevant attribute" (Grether and Wilde 1984). A similar note is struck by Kahneman and Tversky (1979) in their investigation of isolation effect in prospect theory, which refers to "the tendency to cancel out common aspects of choice alternatives and to attend to differences, and can be highlighted by decomposing choice options in sequential manner. For example, in two-stage problems with common outcomes at the first stage, choices are seen to depend on preferences at the second stage conditional to success on the first. That is, since the options are seen to be identical at the first stage, the sequential formulation focusses attention on the second stage. In certain cases, this leads to violations of expected utility theory in that end states are not compared in the normative way (emphasis added).

A third explanation for the differing criteria would be that the processes at play are very different; what are cognitively the most important factors may not be the important ones emotionally.

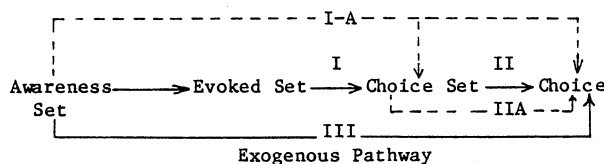
Concept of Relative Dominance of Processes: It has already been mentioned that the relative dominance of cognitive vis-a-vis hedonic process would depend on i) product, ii) personality and, iii) context. When the perceived risk is too high, an exogenous risk reduction method may be resorted to.

The Model

Now we are ready to summarize the model in a diagrammatic fashion. Fig. 7 presents the model of consumer choice process given his or her awareness set of alternatives.

FIGURE 7

MODEL OF CONSUMER EVALUATION AND CHOICE



The evoked set is distilled from the awareness set by the application of several criteria such as functional (salience on a major performance variable), social (peer group recommendation), personal (intuitive appeal), or risk reduction (well-known brand). The choice set, consisting of very few brands (often two), is arrived at from the evoked set using a cognitive-rational eliminative process (denoted I) primarily involving performance and social variables. The final choice is made from the choice set by a hedonic process (denoted II), primarily involving personal, psychological variables. The relative dominance of the processes have already been discussed. In industrial buying situations, even the second stage may be a cognitive-rational one, indicated by II-A, where probably a compensatory rule is applied to the choice set brands. On the other hand, in impulse buying situation, the cognitive-rational process may be entirely skipped and the process may involve only the hedonic element (indicated by I-A). In situations of very high perceived non-reducible risk, the exogenous risk reduction pathway is taken when the consumer goes

ahead and chooses the well-known brand, the brand owned by friends, or a personally known auto dealer.

Implications of the Integrative Model

Implications for Research: An explicit concession of stages and processes other than those they are trying to model would enable researchers of either paradigm to explain observed deviations from their models and, in some cases, violation of fundamental theorems (e.g., utility theory). It could also lead to more accurate specification of the phenomenon modeled and even the development of new ways of measurement. Finally, the approach could serve as a more general and, arguably, more realistic framework for looking at some very significant, but apparently immiscible consumer research efforts.

Implications for Marketing Strategy: Two classes of strategic implications are interesting. The first relates to strategic diagnosis. A product may enter the consumer's choice set regularly, but rarely make it as the choice, while another product may fare excellently in being chosen from the choice set, but may get eliminated from the evoked set too frequently. Both these products may exhibit low market shares, but they call for very different corrective action. The second implication relates to the communication of the product benefits. In a buying situation, the consumer may be in his/her risk reduction mode (elimination process) and is likely to be looking closely for the negative points of a brand, while in a non-buying situation (e.g., window shopping) he/she is more likely to be in a relaxed state and to appreciate the positive aspects of a brand. Thus, it may be advantageous for marketers to explore the latter kind of situations for product communication.

Conclusion

Although treated so by the modelers of the two schools, the cognitive-rational and hedonic aspects are not two mutually exclusive elements in consumers' scheme of things. This paper is an attempt, in a limited way, to integrate these aspects and present the 'whole picture', as it were.

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MEASURING CONSUMERS' INFERENTIAL PROCESSING IN CHOICE

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Abstract

A conceptual framework is used to define a verbal protocol coding scheme that measures two important aspects of consumer inference making: (1) the inferential process used and (2) the nature of the inferential outcome. Use of the coding scheme is illustrated in a study that did not explicitly require subjects to make inferences during a choice task. Differences in inference making for low versus high product knowledge subjects are highlighted.

Introduction

How do consumers make choices from brands when relevant information is missing? One possibility is that missing information is ignored and choice is based on information already available, externally or in memory. Alternatively, the consumer may infer unknown properties and integrate the inferred values with known information. Since brand-related information sources, e.g., advertising or salespeople, rarely offer "complete" information, inferential processes in consumer choice may be widespread. Despite this possibility, our current understanding of inferential processes in consumer choice remains very limited.

Existing research procedures may have contributed to this limited understanding, i.e., researchers have often measured inferences by showing that they affect overall evaluations (e.g., Johnson and Levin 1985, Huber and McCann 1982). However, this gives little insight into the amount of inferencing done, the types of inferential outcomes generated and the underlying processes employed. Also, studies have often either required subjects to make inferences or so structured the situation that subjects may have been "tipped off." Prompting inferences shows that consumers can infer if asked but does not indicate their natural propensity to do so.

In contrast, this paper proposes to directly measure and describe consumers' inferencing using concurrent verbal protocols. Protocols, if properly used, can provide valid indications of information processing (Ericsson and Simon 1980), but the researcher needs a well-defined coding scheme to convert them into useful data. While some schemes have been used to investigate complex phenomena like consumers' use of memory and external information during choice (Bettman and Park 1980, Biehal and Chakravarti 1983), at present no scheme measures consumers' inferential processing. This paper offers such a scheme. It also illustrates its use in a study that examined inferencing differences for low versus high knowledge subjects using an experimental task that did not explicitly request inferences.

Conceptual Background

A Consumer Decision Making Scenario

In a typical choice the consumer encounters information about a set of brands. The consumer's task is to relate this possibly incomplete or incomparable information to a specific usage context and make a choice. Information, which may be presented in various formats, may be found in ads, in-store, etc. Should the consumer feel the need to gather more information before deciding, s/he may consult external sources, e.g., ads, store displays, friends, etc., or s/he may retrieve prior knowledge from memory. If these sources yield sufficient information, a choice may occur. However, if there remain perceived information gaps on relevant evaluative criteria, the consumer may try

to infer the brands' performance on the unknown dimensions.

The need to infer may be prompted by other circumstances as well. For example, the consumer may seek certain product-related benefits, e.g., convenience. If external information does not refer explicitly to these benefits, the consumer may have to infer from other feature information how much of the benefit a brand contains. Thus, inferential processes transform available information into abstract forms more congruent with the consumer's evaluation criteria. Also, at times product information may not be sufficiently explicit. For example, certain ads substitute evaluatively-laden phrases, e.g., "quality performance," for more specific, functional information (Shimp and Preston 1981). The consumer may try to infer the concrete product characteristics indicated by such phrases.

Finally, consumers' processing may be affected by many factors, both external and internal (Bettman 1979). One factor of particular relevance here is the consumer's product category knowledge. Several studies have shown the importance of prior product knowledge in consumer decision making (e.g., Brucks 1985), and noted the possibility that there should be some fundamental differences in inferencing for low versus high knowledge consumers (Dover 1981, Taylor and Crocker 1981).

Inferences Defined

Inferences are beliefs that go beyond directly observable events (Fishbein and Ajzen 1975). However, this statement hides some complexities that need clarification if a protocol coding scheme is to be useful. For the present purpose inferences are defined as beliefs generated by the individual (as opposed to being obtained directly from external sources) and attached to or associated with a particular stimulus, e.g., a brand, a person or a situation.

This definition highlights two issues. First, inferences are generated by the consumer, in contrast to other types of information which may be simply retrieved from memory (Camp, Lachman and Lachman 1980). For example, a consumer viewing a Toyota ad may retrieve the information that it is a Japanese car. This known information (which may have been previously inferred) is stored in the consumer's product category schema and retrieved, not inferred. However, in the absence of prior knowledge, the consumer may infer that the Toyota gets good gas mileage from information about its size.

Second, because of attentional shifts, interrupts, or inability to resolve the issue, a consumer may begin inferential processing without actually creating a new, inferred belief. Thus the definition states that an inferential outcome must be attached to a particular stimulus object. For example, the consumer may retrieve from memory: "Most Toyotas get good mileage." However, until s/he has taken the next step, i.e., "Then this particular Toyota must also get good mileage," no inference has been made.

For coding purposes inferences may differ on two important dimensions: (1) the underlying inferential process used and (2) the nature of the inferential outcome.

Inferential Processes

The literature suggests at least three inferential processes. Evaluative Consistency processes yield inferred

values consistent with prior overall evaluations, i.e., liked brands have positive attributes and disliked brands have negative attributes (Fishbein and Ajzen 1975). Similarly, good performance on one dimension may imply good performance on another. For example, social impression formation research shows that subjects may rely on prior overall evaluations stored in memory to guide subsequent evaluations (Lingle et al. 1979).

Probabilistic Consistency inferences are based on perceived associations between stimulus properties. These associations may be: (1) based on prior experience and stored in memory, e.g., price-quality perceptions (Huber and McCann 1982, Johnson and Levin 1985), (2) derived from external information, e.g., perceived inter-attribute correlations found in a set of brands, or (3) based on logically derived relationships, e.g., "heavier cameras are likely to be more durable and hence more reliable." Thus, these processes represent subjective conditional probabilities that certain properties go with other properties. However, these distinctions, while conceptually important, are hard to make in practice and the proposed coding scheme does not include them.

Finally, consumers may infer using Distributional Knowledge, i.e., by determining typical or average values of a product feature which are then used to fill in informational gaps (Yamagishi and Hill 1983, Meyer 1981). Distributional knowledge may be derived from external sources or consumers may have stored in memory "default" values for particular product categories. These values may then be retrieved and used to fill in missing information. For example, if information is not available about a camera's mode of operation (automatic or manual), the consumer may retrieve from memory a prototypical camera's properties and use the retrieved information to infer that a particular exemplar is, say, automatic. Thus, this type of inference may require two stages. First, the consumer categorizes the target brand, e.g., "that is a German camera." Then the consumer retrieves information from the category schema and attaches the retrieved value(s) to the target brand (Rosch and Lloyd 1978), e.g., "then it must have superior optics." However, in practice the full two-staged process is not always captured by the protocol.

The Nature of the Inferential Outcome

Inferences may include many different types of outcomes (Russo and Johnson 1979) which need to be included in the protocol coding scheme. Thus, at "low" levels, the consumer may infer a concrete, objectively verifiable product feature, e.g., "that camera has an automatic timer," or how the camera can be used, e.g., "on that camera you have to set the aperture manually." "Higher" level inferences may reflect the integration of product relevant information and certain subjective judgments, e.g., "that camera sounds quite sophisticated," or reactions to a brand's performance on a dimension, e.g., "that sounds like a good lens." Finally, at the "highest" level are overall evaluations, e.g., "That would be a good camera to buy." In practice, however, it is hard to unequivocally determine the level of a given inference because the underlying attentional and information integration processes are unclear. Thus, while the proposed coding scheme captures different inferential outcomes, it does not attempt to scale them by inferential level.

An Inferential Processing Coding Scheme

This section defines several classification codes and gives examples of each. Since the study presented later used 35mm cameras as stimuli, examples are taken from that product category. Code categories were designed to capture: (1) the type of inferential outcome generated about target brands and (2) the inferential process that appeared to underlie the inferential outcome. Thus each product inference is categorized by I-codes (inferential outcomes) and P-codes (inferential processes).

Inferential Outcome (I) Codes

I1. Concrete Feature Inferences. This code identifies inferences about specific, objectively verifiable product features or characteristics. For example, "This camera probably has a timer."

I2. Abstract Feature Inferences. This code identifies product feature inferences that cannot be objectively verified because they refer to subjective, perceptual dimensions. For example: "This camera looks pretty convenient."

I3. Product-in-use Inferences. This code is for inferences that elaborate how the product may be used, e.g., "With this camera you'll probably have to make a lot of tricky adjustments."

I4. Product Appropriateness for a Usage Situation. This code is used for statements that assess the appropriateness of a target brand for a given situation, e.g., "This camera is more for vacation or family picture taking."

I5. Product Appropriateness for User Type. This code is for inferences that reflect an assessment of the product's appropriateness for a type of user, e.g., "This is a beginner's camera."

I6. Feature Evaluation. This code is used for statements that evaluate a product's performance on an evaluative dimension, e.g., "That sounds like a good lens on that camera."

I7. Brand Category Member. This code is used for statements that show classification of the brand relative to another, known brand stored in memory, e.g., "I believe this is like a Minolta."

I8. Product Class Category Member. This code is for statements that classify a specific brand as belonging to a particular product class, e.g., "This looks like one of those 'sure-shot' cameras."

I9. Overall Non-Affective Evaluation. This code is used for statements about the brand as a whole that do not contain an evaluative component. Such statements may reflect a counting of desirable brand features or integration of information on several evaluative criteria, e.g., "All these cameras are about the same," or "They all offer something a little different."

I10. Overall Affective Evaluation. At the "highest" inferential level, this code is used for statements that reflect an overall evaluation of the brand, e.g., "This is the best camera."

Inferential Process (P) Codes

P1. Distribution Knowledge Processes. Typical characteristics of the product category are generated and attached to a specific target brand, e.g., "Most 35mm cameras have a normal lens, so I will assume that this one does, also." If this process is based on prior knowledge, it is assumed to require two stages, i.e., categorization and retrieval. Sometimes the protocol contains the classification process, e.g., "That camera is like a Minolta, so I bet it has..." At other times the categorization is not explicitly stated. Two qualifier codes (see below) are used to distinguish distributional knowledge inferences which are explicitly derived from memory categorizations.

P2. Evaluative Consistency Codes. Two codes are used to reflect different types of evaluative consistency processing.

a. Evaluative Consistency at the Attribute Level. This code is used when affect from one or more known dimensions is related to other, unknown dimensions, e.g., "It says here that the camera has superior optics, so I would think that it probably has a good metering system, too."

b. Overall Evaluative Consistency. In this process a previously determined overall evaluation about a target brand is used to make an inference about its unknown features in a manner evaluatively consistent with the prior evaluation, e.g., "This is a very nice camera, so it probably has a good lens."

P3. Probabilistic Consistency. The inferential process appears to be based on a perceived associative rule of the general form: "Other cameras with an (x) also tend to have a (y), so I assume that, since this camera has (x), it has (y) too."

Qualifier Codes

Some protocol coding schemes have a descriptive focus (Bettman and Park 1980), i.e., codes describe a phrase's processing content without further interpretation. Even with these schemes the coder needs to carefully consider the phrase's context. Proper use of the proposed coding scheme, which is concerned with both underlying processes and outcomes, requires even greater care. Nevertheless, the essential incompleteness of protocol data causes interpretation problems. If these problems are explicitly recognized and incorporated in the coding scheme, the researcher can develop a conservative view of subjects' inferential processing by screening out ambiguous data. To this end, eight qualifier codes were defined. Thus, each coded inference phrase contained an outcome (I) code, a process (P) code and one or more qualifier (Q) codes.

Q1. Inference Implied by Context - No Explicit Attachment. Sometimes an inference is not explicitly stated but only implied by the context. Because attachment to a brand is critical, this code is used to reflect the possibility, but not the certainty, that an inference was made. For example, the subject may state: "If John wants a camera that will grow with him, then I would choose camera A." From the context surrounding the first part of the statement, the inference implied, but not directly stated, is that camera A will grow with the user's needs. However, to be cautious in interpreting the data, this conclusion should be qualified.

Q2. Inference Attempted but Unresolved. Sometimes inferential processing occurs but the subject does not or cannot reach a clear conclusion. For example: "Well, the camera might have lenses other than the one in the picture. Most do. I'm just not sure." These statements have theoretical relevance and should be recorded because they may reflect differences in subjects' product category knowledge. This qualifier identifies unresolved inferential processing and thereby permits a search for its correlates.

Q3. Possible Reinterpretation of Stimulus Information. It may be difficult to clearly determine if a statement is an inference or a recoding of externally available information. For example, upon reading that a camera has an easy loading system, the subject may state: "This is a self-loading camera." In fact, the easy loading benefit may be delivered by several functional properties e.g., a film take-up device or an electric film advance, whose presence the consumer may infer. Alternatively, s/he may simply be recoding the externally available information into a more appropriate form. While it may be argued that any recoding of available information is an inference, this qualifier is used to mark the possible indeterminacy.

Q4. Repeated Inferences. This code avoids double counting previously made inferences. When repeated inferences are encountered, it is not possible to clearly determine if the inferential process was actually repeated or, perhaps more likely, that subsequent statements reflect retrieval from memory of the prior inference.

Q5. Multiple Inferences. Sometimes a statement contains several implied inferences, yet it is not possible to determine the actual number, e.g., "All of these cameras are light-weight." The researcher may take the statement

at face value and conclude that, if four brands are available, four inferences were made. However, this may be inappropriate because the statement may refer to only a subset of the brands. The recommended approach is to count the phrase as indicating one inference and to use the qualifier to identify the possibility of multiple inferences.

Q6. Information Source versus Product. This qualifier is used when the coder cannot tell if the statement is a product inference or a comment about some aspect of the stimulus information. The problem is most likely to occur when pictures are shown of products, e.g., in ads. Thus the statement: "This camera is a small one" may be an inference about the camera's actual size or it may be a comment about the comparative size of the illustrations contained in various advertisements. While the researcher could interrupt the subject and ask for clarification, this runs counter to the method's spirit, i.e., a "free-flow" of thought. It may also disrupt the subjects' train of thought. This could cause attentional shifts and perhaps prompt concern with explaining what s/he is doing, thereby encouraging a rationality bias.

Q7. Brand Categorization. This code is used when a distributional knowledge process (P1) is preceded by explicit categorization of the stimulus into a known brand category. For example, "This is a lot like a Minolta, therefore it probably has additional lenses."

Q8. Product Class Categorization. This qualifier code is used when a distributional knowledge process (P1) is preceded by explicit categorization of the stimulus brand into a product class group. For example, "This is one of those old, box-type cameras, so I bet it's pretty heavy."

These qualifiers capture most eventualities. A more general problem is differentiating inferences from retrieval of prior knowledge. For example, if a subject states: "Most 35mm cameras are expensive," does this imply the inference that the target 35mm camera is also expensive? Although such an inference may have occurred, it is also possible that this product category information was simply retrieved and reviewed. This indeterminacy is conservatively resolved by labeling such statements as inferences only when followed by explicit protocol evidence that a new belief was generated with respect to a target stimulus. Otherwise, they are considered prior knowledge. Bettman and Park (1980) provide a useful set of knowledge retrieval codes.

A Study of Inferential Processes

Overview

A study examined consumers' inferential processing during choice. Subjects selected the best 35mm camera from three hypothetical brands. These were described on separate sheets of paper using an ad-like format, i.e., there was a headline and a photograph of a disguised, actual brand followed by a few paragraphs of copy. The ads, which gave information on three attributes, did not give complete information for all brands.

Subjects had to choose bearing in mind a specific context, namely, selecting the brand most appropriate for a third party. While choosing, subjects talked out loud and described what they were thinking. At no time were they asked to make inferences. Finally, subjects of varying experience with the product category were recruited. Prior knowledge was assessed in several debriefing questions and two levels (low/high) were defined. Data was gathered in individual sessions that lasted approximately 33 minutes.

Subjects

100 student volunteer subjects were recruited from the campus community. Their average age was 25 years, and 60 percent were male.

Protocol Coding

Tape recorded protocols were transcribed and coded independently by the authors. To reconcile the codings, the coders first agreed on the phrases that contained inferential content. Then they discussed the codes they had assigned to each phrase. All discrepancies were identified, logged and resolved.

The coders first agreed on 565 phrases which contained inferences. From these phrases, a total of 1882 I, P, and Q codes were assigned, yielding 220 (12%) disagreements of which 42.3% were P codes and 40.5% were I codes. In addition, several phrases were coded by only one researcher. After discussion, 44 of these phrases and the I, P and Q codes assigned by the original coder were accepted in full by the second coder. Thus, a total of 609 inferential phrases were coded with an agreement rate of 85.4%. Of the 609 phrases, 139 were removed because they had qualifiers (Q1, Q2, Q4 and Q6) that indicated some degree of uncertainty about them. The 470 remaining inferences form the basis of the data presented here.

Data Analysis

To identify low (LE) and high experience (HE) groups, subjects' prior experience with 35mm cameras was assessed by a multiple choice quiz (Sujan 1985). The original test, which had 15 items, was reduced to eight items based on (1) pretests that indicated some items confused the subjects and (2) an item reliability analysis. The reduced instrument had a KR-20 test value of 0.8654, indicating a high degree of reliability (Peter 1979). Subjects' experience scores were computed by summing the number of correct responses on the eight item scale. Low (n=22) and high experience subjects (n=26) were then defined at the extreme 22-26% ends of the distribution (zero and six or more correct answers, respectively). To check this classification, two-way chi-squared tests were made with measures of prior 35mm camera use, prior shopping for 35mm cameras, photographic magazine subscription and taking photography courses. All were significant ($p < 0.001$). Also, while experience differences may be confounded with other factors, e.g., intelligence, and need careful interpretation, analyses of the subjects' task perception measures showed no confounding with motivation to process.

Results

Table 1 reports both frequencies and proportions, or the relative use, of the various inference outcomes for LE and HE subjects. On average, HE subjects generated significantly more inferences (5.85 phrases/protocol) than LE subjects (3.32 phrases, $t = -2.71$, $p < 0.01$). These data suggest that inferring may be an important constituent of consumer information processing regardless of experience level. There were also group differences in inferential outcomes. HE subjects made proportionately more inferences about concrete features (I1, $z = 2.56$, $p < 0.01$), about how the product may be used (I3, $z = 1.41$, $p < 0.05$) and about brand category membership (I7, $z = 1.76$, $p < 0.05$).

These inferences reflect HE subjects' greater knowledge of the product class that allows them to "fill in" quite specific brand characteristics during evaluation. In contrast, LE subjects placed proportionately more emphasis on evaluating the product's situation appropriateness (I4, $z = 1.96$, $p < 0.05$) and user appropriateness (I5, $z = 1.35$, $p < 0.10$). Thus, compared to HE subjects, LE subjects seem to make more integrative and evaluative inferences, rather than specific feature level inferences.

Table 2 shows the two groups' relative use of each inferential process. A comparison of the proportions of processes used shows that both LE and HE subjects relied most on probabilistic consistency processes (79.5% and 57.9%, respectively), though the LE proportion was higher ($z = 3.49$, $p < 0.001$). HE subjects used significantly more distributional knowledge processes (24.3% versus 4.1%, $z = 4.83$, $p < 0.0001$). Interestingly, the LE group made little use of evaluative consistency processing. Thus

they may have had sufficient general consumer knowledge to use probabilistic consistency processes in the experimental task. Fishbein and Ajzen (1975) propose that evaluative consistency processing will be used only if probabilistic processing is ineffectual. These data seem consistent with their conclusion. They are also consistent with theoretically based expectations that HE subjects should make greater use of distributional knowledge processes.

TABLE 1
TYPES OF INFERENTIAL OUTCOMES
FOR LOW (LE) VERSUS HIGH EXPERIENCED (HE) SUBJECTS

	Low Experience (n=22)			High Experience (n=26)			Z-value of LE-HE %
	No.	%	Mean	No.	%	Mean	
Inferential Level							
I1. Concrete features	6	8.2	0.27	30	19.7	1.15	2.56***
I2. Abstract features	19	26.0	0.86	43	28.3	1.65	0.37
I3. Product in use	3	4.1	0.14	13	8.6	0.50	1.41*
I4. Appropriateness to a situation	11	15.1	0.50	9	5.9	0.35	1.96**
I5. Appropriateness to a user	11	15.1	0.50	13	8.6	0.50	1.35*
I6. Feature evaluation	5	6.8	0.23	12	7.9	0.46	0.30
I7. Brand category member	0	0.0	0.00	3	2.0	0.12	1.76**
I8. Product category member	3	4.1	0.14	2	1.3	0.08	1.17
I9. Nonaffective overall evaluation	5	6.8	0.23	13	8.6	0.50	0.49
I10. Affective overall evaluation	8	11.0	0.36	14	9.2	0.54	0.43
I11. Other, undetermined	2	2.7	0.09	0	0.0	0.00	1.42*
TOTAL	73	100.0	3.32	152	100.0	5.85	

* $p < 0.10$
** $p < 0.05$
*** $p < 0.01$

TABLE 2
TYPES OF INFERENTIAL PROCESSES
FOR LOW (LE) VERSUS HIGH EXPERIENCED (HE) SUBJECTS

	Low Experience (n=22)		High Experience (n=26)		Z-value of LE-HE %
	No.	%	No.	%	
Processing Types					
P1. Distributional Knowledge	3	4.1	37	24.3	4.83****
P2. Evaluative Consistency					
a. Attribute	1	1.4	1	0.7	
b. Overall	0	0.0	3	1.0	
Total	1	1.4	4	2.6	0.63
P3. Probabilistic Consistency	58	79.5	88	57.9	3.49***
Undetermined Processes	11	15.1	23	15.1	0.00
TOTAL	73	100.0	152	100.0	

*** $p < 0.001$
**** $p < 0.0001$

In summary, these results indicate that (a) even in experimental situations where they are not asked to infer, subjects make inferences during decision making and (b) inferential outcomes and processes may differ as a function of experience level.

Conclusions

The proposed coding scheme helps develop our understanding of consumers' inferential processing. It lets the researcher capture the amount of inferencing and classify it with respect to both type of outcome and type of processing. Thus it moves beyond the aggregate, indirect measures used in previous research and facilitates examination of the underlying dynamics of consumer inferential processing.

Results obtained from using the coding scheme should raise many further questions. Thus, the scheme serves as a guideline for future research. For example, it appears that probabilistic inferential processes are often used. However, several associational processes are included in this category, e.g., ecological correlations, logical propositions and true probabilistic estimates. One area for future research would be unraveling the factors that affect their relative use in inference making.

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THE IMPACT OF INFORMATION LOAD AND VARIABILITY ON CHOICE ACCURACY

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Abstract

Past studies have concentrated on examining the impact of the number of brands and attributes on decision accuracy. Yet the amount of information is only one dimension of the complexity of the task. This research found that the alternative variance and the similarity of the choices has more influence on decision accuracy than numbers of brands or attributes.

Introduction

Despite the number of studies on the relationship between the amount of information and decision accuracy there are still no conclusive results. Studies by Jacoby and his associates (1974a; 1974b) and Malhotra (1982a) characterized decision accuracy as increasing with more information to a point and then decreasing when additional information is given. Several other papers suggested that choice accuracy increases with more information, (Russo 1974; Wilkie 1974; Summer 1974; Malhotra 1982b). Others have shown that the amount of information does not influence decision accuracy (Oskamp 1965; Slovic, 1971). Clearly, more research is needed to clarify the nature of these relationships.

Also, there is a lack of studies on the relationship between other dimensions of task complexity and decision accuracy. Past studies have concentrated on the number of brands and attributes, yet these are only two elements of information complexity. Two other possible dimensions are choice similarity and alternative variance.

Alternative variance is the extent to which all the pieces of information about a brand is in agreement. For instance if a choice was poor on one attribute, very good on another and fair on a third attribute, then there would be high variance. Supposedly, it would be more difficult for a consumer to process information that is highly variable.

The similarity of the choices is the extent to which all choices are equal in desirability. It might be more difficult for a consumer to choose the most appropriate brand when all the available brands are roughly equal in desirability than it is when individual brands are clearly superior to others. Clearly work is needed to examine the relationship between variance and choice similarity on decision accuracy.

The purpose of this paper then is to examine the impact of the number of brands, number of attributes, alternative variance and choice similarity on decision accuracy. Hopefully, this research will yield additional insight concerning the relative relationship between various complexity measures and information overload.

Method

Subjects and Procedures

One hundred-sixty university students participated in the study. The median age was twenty-one and sixty-one percent were male. Because students were used, products

selected for study reflected the interest and experiences of this consumer segment. For this reason ten-speed bicycles, hair conditioners, and rental apartments were selected for evaluation.

The procedures used in this study were as follows. First, eight important attributes for each product class were selected from a pretest of thirty students and from an examination of Consumer Reports. Next, the one hundred and sixty subjects were asked to rank-order the importance of these attributes. Information boards were then created for each product class, like that shown in Figure 1, where the subjects were given several hypothetical brands. These brands were described from very good to very poor on the subjects' most important attributes.

The order of the attributes on the page was the same as the subjects' importance rankings. Subjects were then asked to choose their most preferred brand and then reevaluate the importance of the attributes on a 100-point constant-sum scale.

FIGURE 1

Sample Choice Situations

Product Features	Choice Alternatives		
	A	B	C
Durability	Good	Fair	Very Poor
Price	Fair	Fair	Very Good
Appearance	Fair	Poor	Fair
Guarantee	Poor	Good	Fair

Experimental Treatments

As shown in Table 1 a 4x2x2 factorial design was used to operationalize the treatments in which:

- * Attributes used to describe alternatives varied over four levels (2,4,6, and 8 characteristics).
- * Number of brands varied across two levels (3 and 6 brands).
- * Choice similarity was varied across two levels (no difference between alternatives and discernible difference between alternatives).

Alternative variance for a given brand was varied over a range from very high variability of the information to very low variability.

TABLE 1
Experimental Design*

Number of Product Features	3 choice alternatives overall differentiation between alternatives		6 choice alternatives overall differentiation between alternatives	
	Considerable	Minimal	Considerable	Minimal
2	X ₁	X ₅	X ₉	X ₁₃
4	X ₂	X _{6**}	X ₁₀	X ₁₄
6	X ₃	X ₇	X ₁₁	X ₁₅
8	X ₄	X ₈	X ₁₂	X ₁₆

*Performance consistency (degree of similarity in performance on features used to describe an alternative) was varied from very low (all features were at a similar level of performance) to very high (there was a large discrepancy between performance levels on the features of an alternative).

**Figure 1 illustrates this choice situation.

Choice similarity and alternative variance were quantified as follows. In the condition where the choices were similar the unweighted score of each alternative, computed by assigning '5' to very good, '4' to good, '3' to fair, '2' to poor, and '1' to very poor, was nearly equal. In the dissimilar condition there was a distinct hierarchy of unweighted scores. Alternative variance was computed for each brand using the above coding scheme and then an average was taken for the entire brand set.

Note that descriptive evaluators (very good, good, etc.) were used instead of raw data (49 cents, 96 cents, etc.). This procedure has three advantages. It reduces interindividual differences in perception. It allows for precise and standardized computation of the choice similarity and alternative variance conditions. It removes the necessity for using ideal points in the computation of decision accuracy. This is because each individual can interpret a descriptor in a manner consistent with his or her preference.

Choice Accuracy

A subject's best alternative was determined by multiplying the subjects' importance weight from the constant sum scales for each of the given attributes by the performance of the alternative on each attribute, and then summing the results. When the actual choice matched the best choice, an "accurate" decision was made. The chosen brand, rather than a rank-order of preference, was used to make the process more like a purchase decision.

While there are many ways to quantify decision accuracy, the procedure used in this research is appropriate for several reasons. First, it is consistent with past research in consumer-oriented journals (Jacoby et al 1974a; Malhotra 1982a). Second, it is preferable to other suggested measures of decision accuracy, such as expert opinion. Experts don't always agree and many experts feel that there is no objective way to determine decision accuracy. Other suggested measures also have severe problems (Jacoby 1977).

Analysis

As explained the dependent variable was a binary depending on whether an accurate choice was made, which means that LOGIT is an appropriate analysis technique. There is much support for the use of LOGIT when analyzing this type of categorical variable. (Bishop, et al 1975; Malhotra 1982a; 1982b).

Using the LOGIT framework the experimental treatments created in this study can be represented as follows:

$$\log_e \left(\frac{P_i}{1-P_i} \right) = X_1 + X_2 B_2 + X_3 B_3 + X_4 B_4 + X_5 B_5$$

where:

- P_i = Proportion of correct choices for a given choice situation.
- X₁ = Intercept term.
- B₂ = Number of characteristics (2, 4, 6, or 8).
- B₃ = Number of alternatives (3 or 6).
- B₄ = Choice similarity (distinct hierarchy of choices, all choices similar).
- B₅ = Alternative variance (continuous choices from very small to very large differences).
- X₂, X₃, X₄, X₅ = Importance of these treatments to choice accuracy.

To adjust the probability of a correct choice for chance, the following modification has been recommended (Fleiss 1975) and was incorporated in this study:

$$P_i = \frac{P_{io} - P_{ic}}{1 - P_{ic}}$$

where:

- P_i = probability of correct choice in experimental condition i adjusted for chance selection of an alternative.
- P_{io} = the observed probability of correct choice in experimental condition i.
- P_{ic} = Probability of a correct choice in experimental condition i by chance alone (1 divided by the number of alternatives).

For each of the sets of relationships all possible two-way interactions were specified to allow for examination of potentially important interactive effects between experimental treatments. The linearity of relationships was examined using relevant plots of the data to further determine modifications to the LOGIT model specification.

Results

Table 2 presents the results of LOGIT analysis for each of the three consumer choice situations. The adjusted R²s were .81, .58, and .73 respectively for ten-speed bicycles, rental apartments, and hair conditioners models. In all cases the overall significance was very high. Since no interactions were found to be significant and no nonlinear relationships were found, linear, additive LOGIT models were used to obtain a very good statistical fit between choice accuracy and the four experimental treatments considered in this study.

Attributes

In all three cases, the addition of more attributes to describe choice alternatives did not improve choice accuracy. As shown in Table 2, these effects were not significant. These results are consistent with previous results reported by (Oskamp 1965; Slovic 1975). Thus, the assumption that more information should contribute to improved choice accuracy is not supported by this research.

Number of Brands

In two cases, ten-speed bicycles and rental apartments, the number of alternatives considered had no significant impact on choice accuracy.

However, for hair conditioners the effect of more brands significantly reduced choice accuracy. It is interesting that only with hair conditioners, the least complex product, did the number of brands affect choice accuracy. This might indicate that the number of brands will only overload consumers in low-involvement situations.

Choice Similarity

When the alternatives were similar, decision accuracy significantly decreased for all three products and this suggests that the similarity of the choices might be an extremely important determinant of decision accuracy that has been ignored by past research. Note that the relationship is strongest in hair conditioners, a simpler product. This might be because people spent less time on the decision and thus the similar choices were more difficult to distinguish.

Alternative Variance

The larger the difference in performance levels used to describe the alternative, the lower the observed choice accuracy. As shown in Table 2, this finding was significant for two of the three product choice situations examined in this study. Ten-speed bicycles and rental apartments were the products where the overload occurred. This might have resulted because people were spending more time processing the information on these products, and thus the increased variability of information created more confusion.

TABLE 2
Relative Impact and Significance
of Experimental Treatments

Experimental Treatment	Levels	10-Speed Bikes		Rental Apts.		Hair Conditioners	
		Beta*	Sign. Level	Beta*	Sign. Level	Beta*	Sign. Level
Prod. Features	2,4,6, or 8	-.05	(.73)	-.28	(.23)	-.15	(.40)
No. of Alts.	3 or 6	-.12	(.32)	.09	(.62)	-.44	(.01)
Alt. Variance	Continuous	-.60	(.01)	-.61	(.04)	-.25	(.27)
Choice Similarity	Minimal or Considerable	-.45	(.01)	-.42	(.08)	-.60	(.01)
Adj. R ² & Overall Significance		.81	.00	.58	.01	.73	.00

Discussion

In two choice situations both alternative variance and choice similarity had a greater impact on decision accuracy than did number of brands and attributes. In the third choice situation choice similarity had a greater impact than number of alternatives and product features. Thus, the results of this research confirm the notion that number of brands and attributes have a limited impact, and that variability factors have a great impact on decision accuracy. Clearly, more research is needed to support or disprove this finding.

More work is also needed to understand the theory behind these relationships. The question of why some dimensions are or are not related to choice accuracy might successfully be addressed by protocol analysis. Further, future studies might incorporate product involvement or complexity as an independent variable. Since complexity of the product seems to influence the results in this research, it is possible that this might be an important construct.

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COGNITIVE DIFFERENTIATION ANALYSIS:
A NEW METHODOLOGY FOR ASSESSING THE
VALIDITY OF MEANS - END HIERARCHIES

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Introduction

Means-end hierarchies or chains (Gutman 1982) representing attribute - consequence - value linkages that, in theory, represent how consumers give personal meaning to product attributes and thus serve as the basis of how products are differentiated have recently received considerable attention in the literature (Gutman 1984; Gutman and Alden 1984; Gutman and Reynolds 1983; Gutman, Reynolds and Fiedler 1984; Olson and Reynolds 1983; Reynolds and Gutman 1984a; Reynolds and Gutman 1984b; Reynolds and Jamieson 1984). The primary methodology used to abstract means-end chains is an in-depth interviewing technique, laddering (Gutman and Reynolds 1979), which first takes a basic distinction elicited by the consumer as to how products differ and tries to uncover the personal relevance of the distinction by probing for the higher level meanings with which it is connected.

Once the initial distinction is determined, which typically is at the lowest level of differentiation, the laddering process is initiated by the "why is that important to you question" which produces a higher level meaning. This obtained meaning is then used as the basis for the next level probe. This process continues until both a consequence and a personal value are elicited from the consumer. Thus, the end result of laddering is a combination of the identification of higher level meanings, consequences and values, that stem from the basic attribute level, and the connections or linkages between the various levels.

One key problem that has researchers questioning the validity of the output from laddering has been the issue of demand characteristics of the interviewing process (Morgan 1985; Durgee 1986). Put simply, the interviewing process will virtually always recover the consequence and value levels, thus the obvious question becomes: To what degree are these higher levels of meaning representing different constructs of product differentiation relevant to constructs such as perception and preference? Or, put another way, if we had consumers sort products at each level of the ladder, thereby representing their differentiation at that level, which level would correspond most closely to judgements of either overall product similarity (perceptual difference) or preference?

From a theoretical perspective the assumptions as to the relative relation of the levels of meaning to judgments of both perceptual differences and preference differences are clearly stated. The central tenet of means-end theory is that the higher the level the more personal relevance the distinction is likely to have and thus it should correspond more closely to preference. Also, perceptual differences are thought to be concrete, dealing primarily with the physical aspects of products and thus should operate at the lowest level of abstraction. Attribute level distinctions, then, should have the highest correspondence to perceptual differences.

Several methodological problems emerge when the measurement of the relation of product ratings by level of meaning to differences between products is considered. Basically, judgments between products imply measures of a pairwise nature as would be input into multidimensional scaling analysis. Thus, the relations between a vector of product ratings can be thought of as representing the independent variables and the dependent variable is the pairwise judgments of either psychological or preference distance.

The first measurement problem is how to assess the corre-

spondence of a vector of ratings to a symmetric matrix of distances. This problem is complicated by the fact that only an ordinal assumption is possible when sorting methods are utilized. This problem has been addressed by a pairwise unfolding technique suggested by Reynolds (1983), which only assumes ordinal judgments. The output of this procedure is a set of summary association statistics closely resembling Kendall's tau measures (Kendall 1955).

This measurement approach has been applied to means-end data (Reynolds, Gutman and Fiedler 1984; Reynolds and Jamieson 1984) with the following summary findings which lend initial support for the means-end approach:

1. On average, attribute level distinctions correspond more closely to judgments of psychological distance or similarity, followed by consequences and then values.
2. On average, value level distinctions correspond more closely to pairwise judgments of differences in preference, followed by consequences and then attributes (see Reynolds (1985) for a discussion as to why and how pairwise measures of preference are both relevant and necessary in this context.)

The major limitation of this initial research was that no statistical tests were made on the significance of the measures of association, due to the lack of an appropriate set of statistical assumptions in the initial formulation. The research reported was based upon simple averages of the association measures across the sample. Importantly, these averages were across all attributes, consequences and values, without reference to the individual components. Recent statistical work in this area (Reynolds and Sutrick 1986), however, has now made univariate tests of this type for individual elements of ladders possible.

One notable limitation of this statistical extension is the failure to deal with differentially-weighted multiple variables, thereby providing the researcher with a statistical basis to infer the relative contribution of the higher levels of meaning on an individual basis. Thus, effectively an ordinal regression model that provides both the respective weights of the variables representing the levels of meaning and tests of the relative contribution of each to the model is necessary if a true test of means-end hierarchies is to be undertaken.

Recognizing this key research problem, more recent work detailing the specifics of how a regression extension can be developed has been completed (Reynolds and Sutrick, in review; Reynolds, Weeks and Perkins, in review). The purpose of this paper, then, is twofold. The first is to summarize the statistical nature of these recent developments and the second, and most important, is to provide a basis of understanding of these methods by contrasting them to a more traditional methodology, factor analysis. The understanding of these new methods should provide consumer researchers with the means to study means-end hierarchies and their relationship to consumer perceptions and preference as well as to other theoretical constructs.

Cognitive Differentiation Analysis (CDA)

The $\binom{n}{2}$ pairwise measures of distance will be denoted as Y_{ij} , $i < j$. The descriptor ratings for the i -th stimulus for a given vector corresponds to Z_i . The components of

$Z_i^{(\ell)}$ = (ℓ)th descriptor rating on the i -th stimulus. The goal of CDA is to assess the degree of correspondence of $\{Y_{ij}\}$ either individually, or from a composite of the respective ordinal pairwise relationships of Z_i . This is accomplished by unfolding (Coombs 1958) both $\{Y_{ij}\}$ and Z_i into $\binom{n}{2}$ pairs of pairs relations, comparing Y_{ij} , $Y_{i'j'}$ and Z_i , Z_j to $Z_{i'}$, $Z_{j'}$ for appropriate ij , $i'j'$. (See Reynolds and Sutrick (1986) for a detailed exposition of the analytical method.)

To demonstrate the analytic procedure define random vectors $Z_{ij}^{(\ell)}$ as

$$Z_{ij}^{(\ell)} = \begin{bmatrix} Z_{ij}^{w(\ell)} \\ Z_{ij}^{u(\ell)} \end{bmatrix} \quad (1)$$

where

$$Z_{ij}^{w(\ell)} = \text{MIN} \{Z_i^{(\ell)}, Z_j^{(\ell)}\} \quad (2)$$

$$Z_{ij}^{u(\ell)} = \text{MAX} \{Z_i^{(\ell)}, Z_j^{(\ell)}\} \quad (3)$$

The expansion into the pairs of pairs framework for the independent variables permits the specification of ordinal relationships only when $Z_{ij}^{w(\ell)} \leq Z_{i'j'}^{w(\ell)} \leq Z_{i'j'}^{u(\ell)}$

$\leq Z_{ij}^{u(\ell)}$ with either $Z_{ij}^{w(\ell)} \neq Z_{i'j'}^{w(\ell)}$ or $Z_{ij}^{u(\ell)} \neq Z_{i'j'}^{u(\ell)}$. Thus a function b which indicates a relation can be defined as follows

$$b(Z_{ij}^{(\ell)}, Z_{i'j'}^{(\ell)}) = \begin{cases} 1 & \text{IF } Z_{ij}^{w(\ell)} \leq Z_{i'j'}^{w(\ell)} \leq Z_{i'j'}^{u(\ell)} \leq Z_{ij}^{u(\ell)} \\ -1 & \text{IF } Z_{i'j'}^{w(\ell)} \leq Z_{ij}^{w(\ell)} \leq Z_{ij}^{u(\ell)} \leq Z_{i'j'}^{u(\ell)} \\ 0 & \text{OTHERWISE} \end{cases} \quad (4)$$

The unfolding expansion of $\{Y_{ij}\}$ to ij , $i'j'$ involves only comparisons of the respective pairwise elements and can be summarized as follows

$$Y_{ij}, Y_{i'j'} = \begin{cases} 1 & \text{IF } Y_{ij} > Y_{i'j'} \\ -1 & \text{IF } Y_{ij} < Y_{i'j'} \\ 0 & \text{IF } Y_{ij} = Y_{i'j'} \end{cases} \quad (5)$$

A straight forward set of prediction rules in the univariate case, noting the relations between $\{Y_{ij}\}$ and Z_i can then be denoted as

$$\text{predict } Y_{ij} > Y_{i'j'} \text{ IF } b(Z_{ij}^{(\ell)}, Z_{i'j'}^{(\ell)}) > 0 \quad (6)$$

$$\text{predict } Y_{ij} < Y_{i'j'} \text{ IF } b(Z_{ij}^{(\ell)}, Z_{i'j'}^{(\ell)}) < 0$$

An obvious extension to interval assumptions can be made by simply comparing the absolute differences between the corresponding ij and $i'j'$ pairs. This additional extension offers the further benefit of being able to measure the "metricness" of data by comparing it to the solution that is based upon only ordinal assumptions.

Thus, a simple matching of the resulting 1, -1, 0s for the respective pairs of pairs relations can be seen to yield measures of fit that correspond to more traditional pairwise measures of fit (i.e. Goodman-Kruskal Gamma (Kruskal 1958), Kendall's Tau (Kendall 1955) and Somer's D (Somers 1962)). Though conceptually similar, however, the degrees

of freedom $\binom{n}{2}$ for $\{Y_{ij}\}$ and n for Z_i , creates a highly complex problem when the statistical properties used in hypothesis testing are of issue. The solution to this central issue will be detailed after the measures of association are presented.

Denoted in simplified fashion, the indices are:

$$T_t = \frac{C - D}{C + D + I} \quad (7)$$

$$T_j = \frac{C - D}{C + D + (.5)I} \quad (8)$$

$$T_r = \frac{C - D}{C + D} \quad (9)$$

where C equals the number of concordant relations, (1,1), (-1,-1) and (0,0); D equals the number of discordant pairs (-1,1), (1,-1), (0,1), and (1,0); and I the inconclusive pairs (1,0) and (-1,0).

The statistical properties of the T measures are developed utilizing theories underlying U -statistics (Randles and Wolfe 1979) where an estimate of variance is obtained by the jackknife procedure. Under the null hypothesis, $H_0: f = 0$, the test statistic $\hat{\theta}$, for all measures of T is

$$\hat{\theta} = \frac{T}{\hat{\lambda}_t} \quad (10)$$

where $\hat{\lambda}_t$ is the variance estimated from the jackknife procedure. The jackknife procedure recomputes T successively leaving out stimulus ($-s$), at a time. Thus, the estimate of variance is

$$\hat{\lambda}_t^2 = \frac{n}{s-1} \sum_{s=1}^n \{T^{(-s)} - \bar{T}\}^2 \quad (11)$$

$$\text{where } \bar{T} = \frac{1}{n} \sum_{s=1}^n T^{(-s)}, \text{ and} \quad (12)$$

$T^{(-s)}$ is the statistic T recomputed leaving out the i -th stimulus.

Evaluating the change in the T measure with addition of an independent variable has also been developed. To illustrate, if there are k independent variables and a $(k+1)$ -st variable is added, the new statistic, for each respective measure of T is

$$\hat{\theta}_{k,k+1} = \frac{T_{k+1} - T_k}{\hat{\lambda}_{k,k+1}} \quad (13)$$

where T_{k+1} , T_k are given by either (7), (8) or (9) and, following (11),

$$\hat{\lambda}_{k,k+1} = \frac{n}{s-1} \sum_{s=1}^n \{T_k^{(-s)} - T_{k+1}^{(-s)} - \bar{T}_k + \bar{T}_{k+1}\}^2 \quad (14)$$

The extension to the regression case can be readily performed using a standard regression analysis on the 1,-1,0 values, producing beta weights for each of the components of Z . However, a few other considerations need be taken into account before the regression model is applied. First, the specific nature of this data, where a zero for all independent variables implies a zero prediction for the dependent variable, suggests the omission of the intercept term from the standard regression model (Draper and Smith 1966).

Second, the use of regression yields \hat{Y}_{ij} predictions which do not correspond to the 1,-1,0 values utilized in the univariate measures of T . Thus, for comparative purposes, a transformation must be affected. Under the zero intercept assumption just noted, the solution involves searching by small gradations for optimal cutpoints equal distant from zero, yielding the necessary trichotomy. The evaluative criterion suggested is T_j from (8), for the simple reason that it represents a compromise between the other two measures.

Resulting from the regression are the beta weights and, of course R-squared, denoted R_u^2 , for all $\binom{n}{2}$ pairs. The problem with the directly derived R-squared measure is that it is based upon all of the unfolded pairs of pairs and, as such is not easily interpretable. To permit a more traditional R-squared evaluation with respect to the $\binom{n}{2}$ pairs of $\{Y_{ij}\}$, another extension is required.

The statistics derived from the $\binom{n}{2}$ unfolding and subsequent regression analysis need to be transformed into a framework that is better understood and more easily comparable to standard approaches. To accomplish this, the 1,-1,0s resulting from the application of cutpoints to the $\{Y_{ij}\}$ can be used to "refold" the data into $\binom{n}{2}$ pairs corresponding to the original dissimilarity judgments. This is done by creating a score vector, $\{W_{ij}\}$, as follows:

$$W_{ij} = \begin{cases} 1 & \text{IF } \hat{Y}_{ij} > \hat{Y}_{i'j'} \\ -1 & \text{IF } \hat{Y}_{ij} < \hat{Y}_{i'j'} \\ 0 & \text{IF } \hat{Y}_{ij} = \hat{Y}_{i'j'} \end{cases} \quad (15)$$

By summarizing the net wins in this way for all pairs, the vector W_{ij} can be directly related to the original Y_{ij} . A squared Pearson correlation can then be computed between the predictions and the true distances yielding a R-squared "refolded", denoted R_r^2 , that reflects the overall goodness-of-fit of the CDA regression methodology.

Contrast to Factor Analysis

The CDA model can be conceptually viewed as precisely the converse of factor analysis. The goal of factor analysis is to decompose the matrix of intercorrelations into an ordered set of vectors that optimally reproduce the summary projections, in terms of variance accounted for. Thus, factor analysis yields positions or loadings on each of the respective factors for each of the variables. Each factor, then, accounts for a specified amount of the total variance represented in the initial summary correlation matrix. CDA can be thought of as measuring the relation or correspondence of an a priori set of factors (independent variables) to the criterion matrix of summary interrelationships, the correlation matrix (dependent variable).

Given this juxtaposition of the two techniques, the results from a factor analysis can be used to both demonstrate and evaluate the CDA regression model. That is, by taking a factor analysis solution and considering it as "known" and performing CDA using the factor scores as the independent variables and the original correlation as the dependent variable, an evaluation of the stability of this new approach becomes possible. With this type of retrofitting of solutions, and given the metric nature of the factor analysis solution, a comparison can be made between the metric and ordinal assumptions of the CDA decomposition of the independent descriptor vectors. Obviously, it would be assumed that the metric assumption would be most appropriate for reproducing the original correlation matrix.

An eight variable correlation matrix was subjected to factor analysis yielding two varimax rotated factors (Cooley and Lohnes 1971, pp. 134-135). The correlation matrix and the resulting factors input to CDA are presented in Table 1. The first factor accounted for 74% of the total variance with the second representing 24%.

TABLE 1

FACTOR ANALYSIS EXAMPLE FROM COOLEY AND LOHNES (1971)

CORRELATION MATRIX USED AS PROXIMITY MATRIX

VAR	2	3	4	5	6	7	8
1	.140	.987	.168	.931	.804	.597	.980
2		.160	.930	.491	.693	.877	.331
3			.185	.927	.807	.608	.972
4				.489	.671	.835	.347
5					.962	.848	.984
6						.950	.903
7							.743

ROTATED FACTOR LOADINGS USED AS DESCRIPTORS

	Factor 1	Factor 2
1	.99	.06
2	.09	.99
3	.99	.08
4	.10	.97
5	.91	.41
6	.77	.63
7	.55	.83
8	.97	.25

The univariate tau measures from equations (7), (8) and (9) and the tests of significance from equations (10), (11) and (12) are presented in Table 2. As would be expected the first factor has a higher degree of correspondence than does the second. Also, as expected, the metric assumptions provide a higher degree of correspondence than does the ordinal solution. The measure of significance corresponds to a standard score thus indicating a high degree of correspondence for both factors. It should be noted that the tau values and their corresponding test statistics are negative due to the fact that the correlation matrix represents similarity data as opposed to dissimilarity data as would be the case when distances are involved. Thus, all the signs will be reversed.

TABLE 2

TAU CORRELATIONS AND TEST STATISTICS FOR EACH $Z_i^{(2)}$ VECTOR

WITH THE DEPENDENT MATRIX Y_{ij}

	Metric Assumption		Ordinal Assumption	
	1	2	1	2
T_t	-.8175	-.7460	-.5000	-.4577
$\hat{\theta}_t$	-6.6571	-4.4498	-7.3225	-22.7065
T_j	-.8251	-.7500	-.6528	-.6146
$\hat{\theta}_j$	-6.8153	-4.4668	-9.8568	-20.2061
T_r	-.8329	-.7540	-.9403	-.9351
$\hat{\theta}_r$	-6.9207	-4.4798	-14.9376	-16.1883

The regression results are shown in Table 3. The metric CDA analysis recovers the factor analysis results well, with an R-square reasonably close to the 98% variance explained by factor analysis and coefficients in the same proportion as the percent explained by each factor. That is, the 74% and 24% explained by factor analysis produces a ratio of about 3 to 1 and the ratio of the squared coefficients (.5945 to .3477) is also approximately 3 to 1.

Under ordinal assumptions, the R-square is somewhat lower and the second vector is not significant. Obviously, the factor analysis results are not ordinal, and would not be expected to conform as closely to the interval method. To illustrate, a two dimensional non-metric scaling solution (Young, Takane and Lewyckj 1980) for this matrix produces a Kruskal stress of .009 while a one dimensional configuration increases the stress to only .070, indicating that the space may be adequately explained by a single dimension. Thus the ordinal solution appears to correspond closely to the lower number of dimensions as mirrored by the non-metric multidimensional solution. In sum, the CDA method appears to operate in an expected manner with respect to this simple example with a known solution.

TABLE 3

CDA REGRESSION RESULTS

Metric Assumption		Ordinal Assumption		
parameter	t ratio	parameter	t ratio	
β_1	-.5940*	-17.57	-.8856*	-6.53
β_2	-.3563*	-10.55	-.0996	-0.71
R_u^2	.75	R_u^2	.50	
R_r^2	.83	R_r^2	.34	

*significant at a .05 level

Conclusion

The extension of CDA analysis to a regression format offers a methodology to assess product descriptor ratings to a matrix of pairwise judgments of psychological distance or preference. This new measurement approach has significant potential with respect to small stimulus sets as would typically be the case in marketing research.

Of significant import is the fact that all laddering research can be assessed using this analytical framework thereby providing a straightforward validation paradigm. Tests of significance of the contributions of the higher levels can be incorporated by forcing in the lower levels and then evaluating the contribution of the higher levels in a stepwise manner.

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SCHEMA-BASED PLANNING OF EVENTS IN CONSUMER CONTEXTS

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Abstract

Many types of consumer behavior, including information search, decision making, and product usage, are preceded by some type of planning. This paper examines the role of memory-based schemata in such planning. In particular, the idea is advanced that only the most general aspects of schematic knowledge are well-established in memory and are used on most occasions by most people. Other types of information, such as specific schema variables and their instantiations, are much more variable and context dependent. The results of two exploratory studies are briefly described.

Introduction

We have all failed to plan sufficiently at one time or another. For instance, there is the classic tale of the vacationer in an exotic country who wiled away the days buying souvenirs and bargains. He imagined how impressed his friends at home would be. Only on the day of his departure did he discover that he had no way to take them home because he came with overpacked luggage. A hasty final purchase completed his trip. Although few purchases are so directly caused by memory failure during planning, it seems likely that many purchase decisions are framed by the plans that they fulfill.

In general, consumer research has focused on behaviors that are rather directly related to the purchase of a single item from a set of competing alternatives. Thus, there are large literatures on decision making, information search, reactions to advertising, etc. Within this framework, several authors have noted that memory can exert strong effects on choice by limiting either the number of alternatives that are considered (Alba and Chattopadhyay 1985; Baker, Hutchinson, Moore, and Nedungadi 1986) or the types of information that are retrieved during decision making (Bettman 1979; Biehal and Chakravarti 1983, 1986). Moreover, the effect of memory on choice may depend on the type of decision rule that is employed (Lichtenstein and Srull 1985).

This paper examines the effects of memory on choice from a somewhat broader perspective. First, we focus on planning, rather than decision making, per se. That is, the primary concern is with cognitive activities that precede and guide information search and decision making. Second, the problem domain is defined at a more abstract or diffuse level. In contrast with the traditional problem of brand choice within a particular product class, we address the problem of how consumers draw upon memory to structure several interrelated activities.

A central issue in our discussion is the role of schematic knowledge during planning. The exploratory evidence that is reported suggests two general phenomena. First, people do rely heavily on schema-like structures that are well-established in memory. Second, such schematic structures are fairly general and there is considerable variation in the ways in which specific information is incorporated into planning. Moreover, this variation is systematically related to identifiable contextual factors.

Protocol Studies of Event Planning

Barsalou, Usher, and Sewell (1985) performed two protocol studies in which they asked people to plan various kinds of events. Study 1 observed superficial planning of 24 different events (e.g., buying a dog, travelling to visit a friend, giving a surprise birthday party, getting a

broken car fixed). Study 2 observed in-depth planning of a single event, namely, taking a vacation. After transcribing subjects' planning episodes, Barsalou et al. developed and applied various coding schemes to the protocols. Reliability in analyses for which it has been computed so far has been around .90. The results from both protocol studies will be presented together to provide a more coherent account of how subjects planned events. A forthcoming paper will present these findings in greater detail and in a more quantified manner.

The Nature of Schemas

When subjects were asked to plan an event, they initially retrieved schematic knowledge containing variables that needed to be instantiated for the event to occur. These variables were "schematic" in the sense that they provided a general description of a kind of event, yet accepted more specific information as instantiations. The view of schemas presented here is closely related to the view proposed by Rumelhart and Ortony (1977).

When subjects planned a vacation in Study 2, for example, they initially retrieved variables such as expenses, temporal parameters, location, accommodations, transportation, activities, companions, things to take, and so forth. In many cases, a variable was actually a set of more specific, closely related variables, each of which needed to be instantiated. For example, transportation often included major transportation (e.g., airlines), minor transportation (e.g., airport shuttle), and transportation at the vacation location (e.g., rented car). Similarly expenses often included total cost and source of money. Table 1 provides proportions and average output positions for all the variables instantiated by subjects in Study 2 when planning a vacation. Superordinate

TABLE 1

VACATION SCHEMA VARIABLES PRODUCED IN STUDY 2 (N=16)

Variable	Proportion of Subjects Mentioning this Variable	Average Output Position in Subject' Protocols
location	1.00	2.31
activity	.94	5.60
accommodations	.94	-
lodging	.94	5.53
home care while gone	.38	9.67
food	.25	7.75
transportation	.94	-
major (to and from vacation location)	.94	4.87
at vacation location	.44	9.43
minor (to and from major transportation)	.38	9.17
temporal parameters	.94	-
departure	.75	3.33
duration	.62	5.00
schedule	.56	8.89
things to take	.88	7.57
expenses	.62	-
source	.56	7.44
total cost	.25	7.25
companions	.62	4.30
climate	.50	4.88
hazards	.19	-
health	.19	9.00
things to bring back	.06	12.00

variables such as transportation were counted as instantiated any time one of its subordinates was mentioned (e.g., at vacation location). For this reason, average output position is not noted for superordinates.

One might think that a schema is a static package of variables retrieved as a rigid unit during planning to be instantiated. However, there were several reasons why this does not appear true. First, subjects showed substantial variability in the variables they retrieved and instantiated when planning the same event. Because most proportions in Table 1 were less than 1.0 ($p < .05$ for all values less than .8), subjects in Study 2 clearly did not retrieve and instantiate a static set of variables when planning a vacation. Similar variability was observed when people planned a wide variety of events in Study 1.

Second, after a given subject had retrieved and instantiated a few variables, he or she often experienced substantial difficulty in retrieving additional variables that needed to be instantiated. Static intact sets of variables did not immediately become active when subjects planned events. Instead much time and effort was often necessary to retrieve all the relevant variables. The later discussion of scanning provides explicit evidence for this claim.

Third, some variables were only retrieved when activated by a particular instantiation of another variable, what we refer to as instantiation triggered variables. For example, instantiating the location variable with a foreign location often caused subjects to consider the health hazards variable. This makes sense because it is often necessary to consider health hazards in order to obtain the necessary immunizations before travelling abroad. In contrast, when subjects selected domestic values for location, they never considered health hazards. This, along with other examples from our data, indicate that certain variables may only be relevant in particular planning contexts, where "context" refers to how a schema's variables have been instantiated so far at any given point in the planning process.

Consequently, schemas do not appear to be retrieved as static sets of variables. Instead, it may be more appropriate

to assume that people have loosely-organized schematic knowledge about events, with this knowledge containing variables that vary in accessibility and that are to some extent context-dependent. This does not necessarily imply that there are no stable schemas in long term memory. Rather we propose that long term memory contains a large amount of relatively stable knowledge for a kind of event, but that only a contextually-relevant subset is used in a particular situation and that the same subset is rarely if ever used in two situations. This view is similar to recent characterizations of consumer choice heuristics (Bettman and Park 1980; Biehal and Chakravarti 1986). Barsalou (in press-a) provides a more detailed justification and discussion of this view.

The use of schemas during planning has been studied by a number of other investigators, including Luchins (1942), Byrne (1977), and Wilensky (1983).

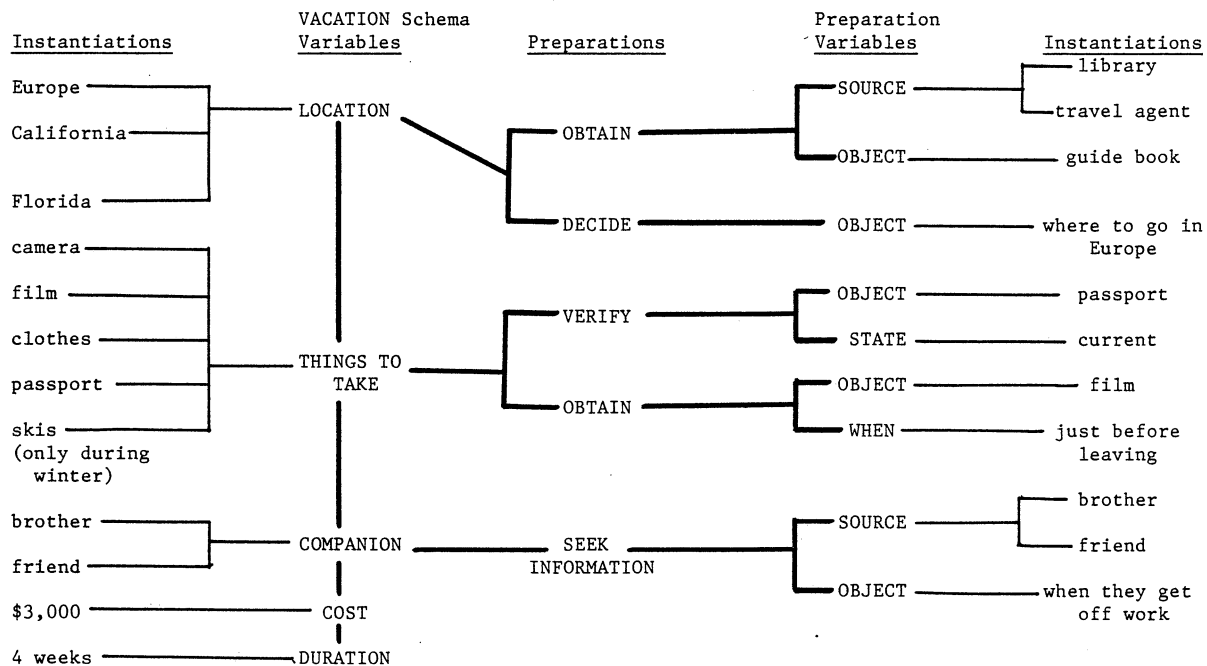
Instantiation of Schemas

Once subjects retrieved a variable, they generally attempted to instantiate it. The left side of Figure 1 shows a partial example of how subjects instantiated variables when planning a vacation in Study 2. Subjects' protocols were generally much more extensive and complicated than this example.

Subjects instantiated variables in a number of ways. For some variables, subjects generated a candidate set of instantiations from which they eventually selected one as part of the final plan. When subjects planned a vacation, they often instantiated location in this manner. For other variables, all of the instantiations generated were included as part of the final plan. When subjects planned a vacation, they often instantiated things to take in this manner. Sometimes subjects failed to instantiate a variable after considering it briefly but planned preparations (discussed shortly) that would enable them to instantiate it later. Other times when subjects didn't generate instantiations for a variable, they described ideal or probable characteristics of instantiations (cf. Barsalou, 1985).

FIGURE 1

PARTIAL EXAMPLE OF A PLANNING SCHEMA



The measurement level of variables varied widely. Across the 24 events in Study 1, most variables were instantiated by nominal values (57%). Variables such as companions and things to take, for example, were instantiated by unordered sets of individuals. Variables were also frequently instantiated by values from ratio scales (20%). Many of these variables had to do with the financial and temporal parameters associated with an event (for examples see temporal and financial parameters in Table 1). Variables were also frequently instantiated by values from binary scales (21%).

Although not shown in Figure 1, the instantiation of a variable was often represented by schematic knowledge itself. In Figure 1, for example, camera could have been represented more completely with the variables that comprise its schematic knowledge (e.g., brand, year, model, cost, size, capabilities). When planning, subjects often generated such variables from the schematic knowledge for an instantiation and then attempted to instantiate these lower-level variables. For example, a subject could have generated the variable of size from schematic knowledge for camera and then instantiated it with pocketsize. Consequently, the plans that subjects constructed can be viewed as a large collection of embedded schemas. Constructing a complete plan requires selecting instantiations for a large number of variables, in a large number of schemas, at many different levels of embedding.

Tagging Instantiations

As subjects retrieved instantiations, they often tagged them in a various ways. One kind of tagging involved an instantiation decision about whether or not an instantiation would be a part of the final plan. In Figure 1, for example, Europe might be explicitly chosen over California and Florida. A second kind of tagging involved stating a necessary condition that had to be met before an instantiation would be incorporated into the final plan. In Figure 1, for example, skis would only be taken if the vacation occurred during Winter Break. Subjects also tagged instantiations in other ways, including evaluations of instantiations and reasons for choosing instantiations. All of these tags appear to become stored in long term memory as part of a person's memory for planning an event.

Preparations

Subjects did not spend all of their time instantiating variables. They also spent a lot of time planning various preparations that would have to be done between the time at which they were planning and the time at which the planned event would occur. Subjects often spent more time planning preparations than they did instantiating variables.

In Study 2, four preparations accounted for 84% of all the preparations mentioned. They were obtaining something (34%), seeking information (25%), deciding something (15%), and verifying something (10%). Subjects often realized that they didn't have enough information to instantiate a variable acceptably at the time of planning. As a result, they planned to seek information about instantiations at a later time and then decide about final instantiations when more informed. For example, subjects often didn't have enough information at the time of planning to decide on particular accommodations. Consequently, they planned to seek information about accommodations and to make a final decision once better informed.

Subjects also often realized after instantiating a variable that the instantiation chosen either entailed having to obtain something or verify that some state was true, if the plan was to succeed with that instantiation. For example, one planner taking a vacation to the beach didn't have a swim suit and, therefore, planned to obtain one before leaving. Another planner needed to take a

passport for foreign travel and, therefore, planned to verify that it was still current.

As can be seen from Figure 1, the preparations in subjects' protocols were schemas themselves. Each preparation schema generally had a characteristic set of variables; these variables were instantiated in the various ways discussed earlier for main schema variables; and instantiations of these variables were tagged with decisions and so forth just as for the instantiations of main schemas variables. In general, these four preparations appeared to be well-learned and highly-articulated cognitive skills that most people possess and that are probably used across a wide range of planning situations. Obtaining things, seeking information, making decisions, and verifying states each appears to be an activity that most people perform regularly, and each appears to be an interesting and important object of study in its own right. Interestingly, only seeking information and deciding something have received much attention in either the consumer or cognitive literatures. Other preparations include informing (3%), constructing (3%), giving (3%), packing (3%), discussing (2%), recommending (1%), and completing (1%).

Rules of Constraint Between Variables

Subjects' schematic knowledge of events also contained another important kind of information, namely, rules of constraint between variables. These rules specified how the instantiations of one variable were related to the instantiations of another variable. Subjects frequently used these rules to select instantiations and to insure that the instantiations they selected were compatible with the instantiations of other variables. In Study 2, we observed subjects using 51 different rules, with many being used frequently. For example, subjects often stated that the instantiation of available money determined the instantiation of location, the underlying principles being that (1) more money enables travelling to more distant locations, and (2) more money enables staying at more expensive locations. Similarly, the instantiations of activities often constrained the instantiation of location, the underlying principle being that certain activities require locations with certain characteristic (e.g., snow skiing requires mountainous locations). Further examples of these rules are shown in Table 2. Most variables appeared to be constrained by rules projecting from many other variables, and a given variable often projected constraint to many variables.

TABLE 2

EXAMPLES OF CONSTRAINT RULES MENTIONED BY SUBJECTS

Constraints on instantiating LOCATION

Activity: Certain activities can only be performed in certain locations (e.g., skiing in mountains).

Amount of money: More money enables more expensive locations.

Constraints on instantiating ACTIVITY

Companion ability: Some companions may not be able to perform certain activities (e.g., grandparents and skiing).

Departure: Certain times of year enable and prevent certain activities (e.g., fall and seeing leaves turn).

Things to Take

Location: Certain locations require certain things (e.g., passports).

Major transportation: Certain transportation may require certain things (e.g., driving and maps).

Departure

Companion: When a companion can get off work may determine departure.

Cost: It's sometimes cheaper to go at certain times of year (e.g., the offseason).

Subjects also frequently mentioned high-level goals while planning. When planning a vacation, for example, subjects often attempted to maximize safety, to maximize enjoyment, to maximize comfort, to minimize cost, and so forth. These goals often played an important role in how people instantiated variables and appear to be the source of the ideals discussed in Barsalou (1985). It would not be surprising if the high-level goals for an event schema are integrated together with rules of constraint between variables to provide an intuitive theory for that kind of event (Murphy and Medin, 1985).

Scanning Schema Variables

As discussed earlier, subjects often had difficulty retrieving variables that needed to be instantiated. At these points, subjects often explicitly scanned the schema variables they had already instantiated. Here are several examples:

um... we'd be all set for the plane, for places to stay, travel while we're there, um... eating while we're there, um... what else... where to go while we're there... um... (whispered) God I wonder if that's all there is to it

um... okay, so let's see... um have I planned everything? Where, when, who, money, what I'm gonna do...

well after we have figured out the location, the time, and if we can afford it, then we'll plan what we're going to do

um... let's see, so once I had a time and an agreed-upon group, then we'd work on the specific location.

Although not all subjects scanned explicitly in this manner, it would not be surprising if all were scanning implicitly.

Scanning may perform several functions: First, subjects may scan to insure that they have not forgotten to instantiate any necessary variables. Second, subjects may use scanning as a means to retrieve variables they are having trouble retrieving. Because variables are related to one another by rules of constraint, scanning instantiated variables may activate uninstantiated variables via these relations. Third, subjects may use scanning as a means of propagating constraint. By reminding themselves of how they have instantiated previous variables, subjects may insure that instantiations of future variables will be compatible with already existing instantiations.

Whatever purposes it may serve, scanning clearly demonstrates that people have variables in mind when planning events. This offers support for the existence of schematic event knowledge in long term memory and for its use in planning.

Constraint-Driven Focusing of Schema Variables

When instantiating a variable, subjects often constructed increasingly specific categories of instantiations for the variable, a phenomenon we will refer to as focusing. For example, when one subject attempted to instantiate location, he first focused the set of possible instantiations to places that can be driven to and later focused the first focusing to places that can be driven to that have fishing. We observed an average of 3.44 explicit focusings per subject, and we suspect that a great deal of additional focusing occurred implicitly.

Interestingly, many of these focusings appeared to be constraint-driven in that subjects used the instantiations of other variables to guide focusing. In the above example, the first focusing (places that can be driven to) appeared to have been driven by the subject having decided to instantiate transportation with drive my car. Similarly, the second focusing (places that can be driven

to and that have fishing) appeared to be driven by the subject having decided subsequently to instantiate activity with fishing.

In other words, what subjects often appeared to do when focusing a variable was to conjoin the variable with one or more instantiations of other variables to construct increasingly specific categories of possible instantiations. This is quite similar to the conjunctive and Elimination-By-Aspects strategies that have been discussed in the context of decision making (Payne 1976; Svenson 1979; Tversky 1972; Wright 1975). The present analysis highlights the interactive and context-dependent aspects of such processes.

The Origin of Goal-Derived and Ad Hoc Categories in Planning

These results so far suggest an account of how categories originate during planning. According to this account, categories can originate in two ways: First, some categories originate because they provide sets of instantiations for schema variables. For example, places to go on a vacation provides instantiations for the location variable in the vacation schema. Second, other categories originate during constraint-driven focusing when subjects conjoin a variable with one or more instantiations of other variables. For example, places to go on a vacation that can be driven to and that have fishing results from conjoining places to go on a vacation with instantiations of the transportation and activity variables. We refer to both kinds of categories as goal-derived categories (Barsalou 1983, 1985).

To the extent a goal-derived category receives frequent processing, it should become well-established in memory. This appears to occur for many of the categories that instantiate schema variables. For example, people seem to have stable knowledge of activities to do on a vacation. This also appears to occur for frequent constraint-driven focusings of schema variables. For example, people seem to have stable knowledge of activities to do on a vacation at the beach.

However, many constraint-driven focusings produce novel categories, what we refer to as ad hoc categories (Barsalou 1983, 1985). These categories become constructed when other variables are instantiated in a novel way such that a novel focusing of a variable occurs (cf. Bettman and Zins 1977). For example, activities to do on a vacation with one's grandparents in Tokyo might be an ad hoc category for someone who has never experienced this combination of constraints before. Of course, the categories that are ad hoc should vary from person to person, depending on their experience.

If this account is correct, it becomes possible to specify the space of categories that can be constructed during planning. Once the variables of a schema are known, and once the instantiations of these variables are known, then the categories that can exist are (1) those that instantiate the schema variables, and (2) those that instantiate the possible focusings of those variables, as constrained by the existing instantiations of other variables. In addition, if rules of constraint between variables are taken into account, then the space of potential categories is reduced substantially. Because these rules specify that many combinations of instantiations are impossible, they rule out all constraint-driven focusings involving those combinations.

By collecting normative data about variables and their instantiations, it becomes possible to map out the space of categories that may be used when achieving a particular goal. For many natural domains, it may be impossible to identify all the possible variables and all their possible instantiations. However, in most cases it appears possible to identify a very large proportion of the relevant variables and instantiations such that the potential space of categories can be mapped out to a large extent. In certain settings that have relatively static

and well-defined domains, it should be possible to map out the space of categories completely. In addition, as new variables and instantiations are encountered, the new categories made possible can be easily specified.

Conclusion

The process of planning an event can be viewed as conceptualization. To plan an event, people initially retrieve schematic knowledge about that kind of event in the form of uninstantiated variables. These variables provide a vague conceptualization of the kind of event being planned. Schematic knowledge not only provides the initial conceptualization of an event, it also provides materials--in the form of well-established goal-derived categories--that can be used to construct more specific conceptualizations. By constructing ad hoc categories through constraint-driven focusing, and by eventually selecting specific instantiations, people can increasingly refine their conceptualization of an event.

Besides containing materials from which plans can be constructed, schematic knowledge also provides guidelines for how to select and combine these materials. The high-level goals and rules of constraint associated with a schema provide a causal model of the event that guides and constrains conceptualization. This model specifies what instantiations are acceptable in particular contexts and how constraints are to be combined once variables in a schema have been instantiated. In addition to schematic knowledge, people also use schema-independent tools--in the form of preparation schemas--to help conceptualize and eventually execute an event. These cognitive skills often serve to increase a person's knowledge of a kind of event and to provide an interface with the physical world such that the plan can be implemented.

Much consumer research has been directed at the process of decision making and the information that directly influences purchase decisions. Most of the research paradigms that have been used impose a specific structure on the decision. Research on the nature of consumer planning should complement this effort by providing an understanding of how consumers structure problems for themselves.

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A BEHAVIORAL VIEW OF PROMOTIONS EFFECTS ON BRAND LOYALTY

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ABSTRACT

Brand loyalty is felt to be declining in many product classes where there is a high level of sales promotions dealing and where there are few perceivable brand differences. Behavioral learning theory suggests that deals reinforce the search for new deals and lead to deal prone behavior rather than new loyalty.

THE PAPER

In this session on new perspectives toward brand loyalty, we were asked to begin with Jacoby and Kyner's (1973) definition of brand loyalty. That definition, "the biased (nonrandom) behavioral response (purchase) expressed over time by some decision making unit with respect to one or more alternatives ... is a function of a psychological process" (p. 2), is acceptable to me if I can add that such a response can be toward a benefit or a deal in the same way it could be toward a brand.

When we discuss brand loyalty we generally are considering frequently purchased goods and these are often referred to as low involvement. Perhaps brand loyalty is a low involvement mechanism that makes life easier for consumers; it is easy to choose the same brand, the same benefit or the same deal. A key unique benefit for convenience goods may be price, and, therefore, loyalty to price or deal may be the most viable low involvement behavior.

Returning to Jacoby and Kyner's definition, I would suggest that a psychological process that may explain brand loyalty is that of behaviorism. The central concept of behavioral learning theory is that behavior that is positively reinforced is likely to reoccur while that which is not reinforced, or punished, will be extinguished. Consumers become loyal to brands that are reinforcing to them; good decisions are reinforced while poor decisions are not.

When we look at the impact of sales promotions deals we see the same influences. Consumers learn to try brand B for fifty cents off its normal price; the deal reinforces the behavior and, therefore, the consumer learns to repeat the behavior. What is the lesson that is learned? Is it to repeat using B, or is it to repeat using a deal? If B has its own unique benefit, then it is likely to be repurchased, but, if B is not very different from brand A, then the consumer learns two things. The consumer learns that using a deal is reinforcing, and that A and B are similar enough such that the deal that is offered outweighs the slight benefit advantage held by either brand.

At one time the major purpose of sales promotions was to aid a new brand during its introduction by helping to break old loyalties. In 1981 I discussed behavioral learning theory in that context, and tried to show strategies that could break old loyalties and create new ones (Rothschild and Gaidis, 1981).

The world has changed rapidly and now the large majority of promotions are used by existing brands to defend share from encroachment. With so many competitors using deals, my current view is that sales promotions can break old loyalties, but new loyalties are created for price and deals, rather than for the dealer's brand.

What is happening to brand loyalty? While it is alive and well in some product classes where brands have perceivable differences (either real or image created), brand loyalty is slowly dying in other classes where the main perceivable difference is in the price, and where

consumers have learned, via deals, that there are no other differences that matter.

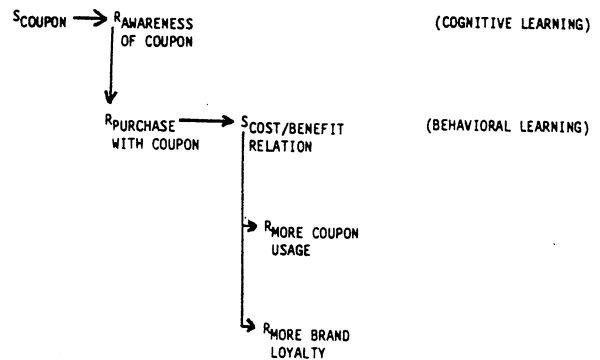
In putting this presentation together, I spoke to fifteen practitioners; fourteen felt that loyalty is declining. Following are some data from Information Resources, Inc. that support this view.

1. Data from one food category show that heavy deal users are also heavy product users. These consumers buy 40% of all product and make 80% of their purchases on deal.
2. There is a significant negative correlation (-.52) between amount of deal and brand loyalty. As the value of the deal increases, loyalty decreases.
3. In a second food category, when purchases are made without a deal, 64% of buyers repurchase; when purchased on deal, 37% repurchase. Without a deal, consumers learn brand benefits and repurchase; with a deal consumers learn the benefit of the deal and look for another deal.
4. Double coupons lead to a 300% increase in redemptions for retailers using this promotion, but there is no change in retailer market share or loyalty. Why? When one store offers double coupons, others respond and there is no change in store usage. This is a case where deals do not seem to erode loyalty.

I believe that sales promotions are ruining brand loyalty and that behavioral learning theory can explain why. When we offer a deal we often reinforce the wrong behavior. Figure 1 shows that the stimulus of the coupon leads to the response of awareness of the coupon. This is cognitive learning but generally does not help brand learning because there is already high awareness for the established brand.

FIGURE 1

A BEHAVIORAL VIEW OF PROMOTIONS



Later, the response of purchase (aided by the coupon) is reinforced by the stimulus of the product (at a lower price). This is behavioral learning and is repeated often across many product classes.

There are at least two possible long run outcomes. One is that consumers learn to look for deals; this will occur if price is more salient than other benefits. The other outcome is that brand loyalty towards the new brand will emerge. This will occur if some other benefit is

more salient than price and no better deal emerges to interfere with this new loyalty.

Behavioral learning theory also shows that immediate reinforcement is more powerful than delayed. The deal is reinforcing immediately at the cash register but the product does not reinforce until it is later consumed at home. Therefore, the deal may be stronger.

Previously reinforced behaviors are extinguished when there is a removal of the correlation between the response and the reward. If the promotion is the greatest reinforcer, its removal breaks down the correlation; there is no longer reinforcement. Extinction also occurs with the introduction of a new reward that is not correlated with the desired response. This occurs when the competition offers a better deal, and is an easy strategy for a competitor to adopt. These are just a few of the behavioral concepts that aid in predicting the impact of deals on brand loyalty.

How big a deal does it take to break down loyalty? Shoemaker and Tibrewala (1985) ask that question about four convenience grocery products and use a survey to elicit responses. A low valued coupon (15¢) only attracts current customers and therefore lowers margin. A high valued coupon (50¢) brings in new users and breaks old loyalties, but does not lead to new repeat purchases. Perhaps the coupon does not lead to brand loyalty because consumers are learning to become deal loyal.

There is a new brand in many convenience goods product classes. This brand is called "deal" and it has growing loyalty and growing market share. We can no longer study brand loyalty without considering "deal," and behavioral learning theory provides useful insights for studying this threat to existing brands.

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Advertising:
Meaning or Information?¹

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"Why do consumers read or view advertising? Well, they must expect some benefit. Perhaps they receive some information." (Shugan 1982, p. 118).

Abstract

This paper examines two models that have been used in the study of advertising: the information-based model and the meaning-based model. It argues that the information-based model has two theoretical insufficiencies and seeks to characterize their nature and origins.

Introduction

The prevailing paradigm in consumer research conceives of the consumer as someone who is information-centered. This model defines the consumer as someone constantly seeking out and manipulating information in order to make choices between consumer goods and services. Much of the model building rehearsed in consumer behavior texts is designed precisely to give a systematic account of this information and the manner in which it reaches, and is then manipulated, by the consumer. Much of the research reported in the field uses this paradigm to identify the important questions and data. For some of us in the field of consumer research, an information-based model on the consumer has become the foundation of inquiry.

Plainly this model has served us well and plainly it will continue to do so. This model has achieved such preeminence, however, that it is easy for us to forget that it is only one of several alternatives with which we can make sense of consumer behavior and undertake consumer research. The purpose of this paper is to consider one of these alternatives. The paradigm recited here treats the consumer as someone who is meaning-centered. It will attempt to ask what happens to our vision of the consumer and, more particularly, to our vision of advertising, when we adopt this rather different perspective. It is hoped this meaning-based model will prove an illuminating and useful addition to the theoretical armory now at the disposal of the scholar engaged in consumer research.

A useful way of thinking about this discussion is provided by T.S. Kuhn's concept of competing scientific paradigm (1962). I do not wish to evoke the whole of this model, but it is useful to observe that the information based and the meaning based approaches are in some respects very like competing paradigms. They begin from different assumptions, they work towards different conclusions, they capture different kinds of data. These are fundamental differences, not a simple division of academic labor. These two paradigms construe the world quite differently. The differences between them can be as marked as those between different cultures.

The Kuhnian perspective, interestingly, has a polemical value for both paradigms. It encourages us to see that the following criticism of the information processing model is bound to accuse it falsely. My criticism will resort to assumptions, techniques and data that the information based model is not designed to accommodate. Virtually all of my criticisms can be met with the counter-criticism: "but our model was never designed to

do what you say it does not do." In the words of Kuhn, much of my criticism will "read through" the information paradigm and therefore fail to come to grips with its proclaimed purposes and projects. This I grant readily.

But the Kuhnian approach can also be used to support the cause of criticism. It tells us that prevailing paradigms are well advised to take account of the seditious mutterings of the kind that are made against it here. It is, after all, from just such mutterings as these that new paradigms rise to overturn the old order. Kuhn's perspective suggests that it is, when is possible, better to accommodate mutterings than to exile them.

A Meaning-Based Model of Consumption

Let me briefly characterize the meaning based model and then outline the approach it takes to advertising. This model says that the consumer is an individual in a cultural context engaged in a cultural project. Both the context and the project are culturally constituted. The context consists of the culturally specified ideas of person, object, activity, time and space in which the culture consists. I have dealt with this elsewhere in some detail and will not elaborate it here (McCracken 1986a).

The project is an ongoing enterprise by which the individual concepts of the self, of the family, of status, of nation, of world. This project consists in the selection of key notions from a range of alternatives and the more or less thorough and harmonious enactment, refinement and integration of these notions in a single life (Hirschman 1986, McCracken 1986b, 1986c). In this scheme, the self and a life are "always in production, in process" (Bruner 1984, p. 3). Indeed what Bakhtin (1981, p. 270) says of language applies equally well to the self:

A unitary language is not something given but is always in essence posited--and in every moment of its linguistic life it is opposed to the realities of heteroglossia. But at the same time it makes its real essence felt as a force for overcoming this heteroglossia, imposing specific limits to it, guaranteeing a certain mutual understanding and crystalizing into a real, although still relative, unity...

The project is a continual one in two senses. It is, first of all, continually processual, so that its objective, the construction of a life, is realized not with a single operation, or a series of operations, but through the act itself. The project does not have a beginning and an end; the project is fulfilled as it is undertaken. Second, it is constantly changing as the individual is driven to change by circumstance, preference, and the life cycle. New projects become necessary as the individual ages, as some projects prove impracticable, as some of them are completed and as the world around the individual changes. All of these factors call for new projects. It is for both of these reasons perpetual.

The model of consumption that follows from this perspective says that the world of goods is a wholly cultural construction and that culture is constantly being played out in goods. The ideational and material aspects of the world are intimately linked in ways that we understand and in ways we are only beginning to understand. Cultural meanings, those in goods and those outside of them, make up the cultural context of consumption.

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Consumer goods are also essential to the project by which our lives our constructed. Consumer goods, in their anticipation, choice, purchase and possession, are an important source of the meanings with which we construct our lives. They are also an important instrument by which we capture, experiment with, and organize the meanings which we construct our lives.

Advertising in the Meaning-Based Model

Advertising plays an interesting role in the context and the projects of consumption. As I have tried to suggest elsewhere advertising is one of the ways in which we get into goods (McCracken 1986a). It is the conduit through which meanings are constantly transferred from the culturally constituted world to the consumer good. Ads are what (Lotman and Uspensky 1978, p. 213) would call a "diecasting mechanism." Lotman and Uspensky devised this term for language and its "transformation of the "open" world of realia into a "closed" world of names" (1978, p. 213). But it applies equally well to advertising, especially in a culture like our own that is constantly opening up the world of sensation and signification to novel elements and configurations. Advertising helps to capture these old and new cultural meanings and invest them in consumer goods where they become accessible to the consumer. A process of constant experimentation is taking place here in which meanings are suggested and revised, combined and recombined. Advertising puts at the disposal of modern culture an area of play, experimentation and innovation with which to fashion new cultural meanings and reorganize and reassign old ones. It is where culture does its diecasting.

In a more mundane manner, advertising serves as a kind of dictionary constantly keeping us apprised of new consumer signified and signifiers. We cannot read the cultural context without this source of instruction. In this capacity, advertising makes an important contribution to the context of consumption.

But let us now consider the contribution that advertising makes to the consumer's project. Martin Silverman (1971) speaks of the intense interest that the Banagan people of the Pacific paid to the newspapers and magazines in a time of astonishing dislocation and stress. He wondered what they were looking for there and concluded finally that they were looking for some thinkable, actionable vision of themselves. Modern consumers, untouched by crisis but subject nevertheless to change, examine advertisements for a similar reason. They are searching out meaning there.

They are looking for something they can use in their construction of new versions of the self, of the family, of a community. They are looking for meaning, not in that hackneyed existential sense, the one that refers to meaning, capital "M", as an ultimate sense of purpose. What they are looking for is small meanings, concepts of what it is to be a man or a woman, concepts of what it is to be middle aged, concepts of what it is to be a parent, concepts of what a child is and what a child is becoming, concepts of what it is to be a member of a community and a country. These are the projects that preoccupy us on a continual basis, these are our preoccupations in a time and place that has given the individual astonishing liberties in matters of self definition. Indeed, what were once liberties are now a necessity. We turn, in part, to the meaning of goods, and our source of instruction and experimentation here is the advertisement. When the consumer looks at ads he or she is looking for symbolic resources, new ideas and better concrete versions of old ideas with which to advance their project. Meaning moves from culture to us through goods.

A Meaning Based Critique of the Information Based Model

Well, this notion of the consumer, of consumption and of advertising, is not new to us. Versions of this concept have been floating around in anthropology and consumer research for more than a decade (cf. Belk 1982, Hirschman

and Holbrook 1981, Homan 1980, Sherry 1985, Williamson 1978). But we have not yet fully contemplated the implications of this model for the information based concept of advertising. We have yet to take these ideas into the lion's den. This paper suggests only a first pass in this effort, a quick dash across the arena, as it were. More detailed criticism may be forthcoming from braver souls.

From the meaning based point of view, the information model's treatment of advertisement is unsatisfactory because it gives a satisfactory account of neither of the principle components of the meaning based approach as it has been described here. This model is prepared to come to terms with neither the cultural context of consumption nor the cultural project in which the consumer is engaged. The remainder of this paper will detail these problems with the model and specify the theoretical implications and origins of their difficulties.

Context

The information processing approach ignores the cultural context of consumption. It provides no way of observing that the individual who is processing information is embedded in a highly structured and meaningfully constituted environment. It gives no way of permitting us to see that the individual is the recipient not just of information but also of meaning. As a member of a culture the individual sees his or her world through an interpretive frame. This frame is culturally constituted. It is fashioned according to the specifications of the culture. The world he or she perceives is itself culturally constituted according to the specifications of culture. Everything that is perceived by the individual is therefore doubly mediated by culture. Culture constitutes both the world and the means by which it is apprehended.

The information processing model divorces the individual from this cultural context. It fails to see that the individual is embedded in a meaningfully constituted world, that has been divided up and organized by the beliefs of a culture. And it fails to see that the individual cannot apprehend this world except through a lens that is also the work of culture.

Certainly the existing models of decision process models sometimes have boxes marked "social influences" and arrows connect these boxes to boxes marked "belief," "attitude," "memory" and so on, but the nature of the relationship is rarely specified in a manner that captures the cultural meanings according to which consumption is organized. The absence of this specification means that the really important part of the model is all of the stuff that takes place within the individual's head. But the model gives no way of including in this head all of the collective meanings and conventions on which it draws and on which it operates. The effect of context and the profoundly collective nature of meaning is largely left out of account. For this paradigm the individual does not live in a culturally constituted world. Even the more recent work on schemata and scripts and their active synthesis of the world does not fully capture the perfectly cultural, collective, supra-individual nature of this meaning. This criticism of an essentially psychological model for the study of social behavior has been made convincingly within the field itself (Harre and Secord 1972).

These limitations of the model make the full treatment of advertising problematical. When individuals regard advertisements or any other form of stimuli, they are looking at material that has been culturally constituted and they are interpreting it according to cultural conventions. These conventions specify perceptual acts at the most simple level and the highest order appreciations, such as rhetorical rules. This is highly coded, regulated material that the individual cannot handle at all unless they bring to bear the interpretive frame that culture puts at their disposal.

Still more problematically, the model cannot show how the individual mind participates in the meaning manufacture process in which advertising consists. Advertisements are very deliberate attempts to put meaning into goods. This process depends upon the observer of the ad, for it is this observer who is the final agent of the process of transference. In this understanding of advertising, the individual's mind is not merely drawing information from the ad, which it will then store in memory and variously grade and manipulate at the moment of decision. It is participating in the assignation of meaning to consumer goods.

When the information based model takes no account of the cultural context, it reproduces one of the cardinal sins of the field of psychology. As Shweder (1984) puts it, it has been one of the chief "research heuristics" for the psychological sciences that "what's really real is inside the skin; the individual person is the sole unit of analysis" (1984, p. 3). This narrow focus excludes from consideration the collective and the supra-individual, and it makes the individual the locus of all that need be taken into account to understand social behavior. Indeed the information processing model commits itself to something very like methodological individualism (Lukes 1968, 1973b). It makes the individual the only locus of meaning and significance, and supposes that within the teeming neurons of an individual brain one can discover and capture all of the essential ingredients and logics of the decision making process. But as Durkheim argued long ago, social facts cannot be accounted for by individual ones (Lukes 1973a, p. 20).

All of this is to say that the information processing model restricts analytical attention to the individual. It eliminates from consideration the cultural context from which the individual draws his or her information, the cultural context which supplies the process by which this information is apprehended and manipulated, and the cultural context in which the individual enters into the advertising process to help manufacture certain kinds of consumer knowledge and signification. There is evidence that the field of psychology is now preparing to take account of the role of culture and shared information in information processing but the completion of this undertaking is a long way off (Murphy and Medin 1985; Harre and Secord 1972).

Project

The information processing approach also ignores the cultural projects of consumption. It provides no way of understanding how the individual who is processing information is engaged in several formal and informal projects of self and world construction. It gives no way of permitting us to see that the individual is not just the recipient of meaning but also active in its construction. As a member of a culture the individual is engaged in fashioning ideas of the self, the family, and the nation. These cultural activities are used to "perform" or "enact" these ideas and give them legitimacy, substance, credibility.

One of the chief ways in which both the individuals and collectivities of this culture perform and enact their ideas of self and world is through their consumer goods. Consumer goods, charged with cultural significance, serve as dramatic props and meaning sources. They provide ideas of gender, class, age, lifestyle to individuals and help them make these ideas a tangible reality.

The information processing model makes no provision for these cultural processes. This model assumes that what the individual wishes to draw from consumer goods are "benefits." The individual's "project" from this point of view is to survey the market place until he or she is able to determine which product will best "satisfy" his or her "needs." This formulation makes no provision for the creative manipulation of this meaning in the construction of notions of the self and world. I do not wish to

dispute that consumers do seek information in the pursuit of interest and benefits, but to suggest that this is all that is taking place is to very substantially underspecify the project in which the consumer is engaged.

The information processing model tends instead to see the individual as a rational individual who is maximizing interest through the pursuit of calculable benefits. In this model the individual is not constructing a concept and a reality of his or her world. He or she is seen instead to be calculating the surest way to satisfy needs.

This aspect of the theory also has certain disadvantages in the study of the nature of advertisements. First of all and most obviously it makes ever so slightly mysterious the fact that so much of advertising has to do not with lists of information and descriptions of products benefits but with evocative images and text that appears to supply no obvious basis for rational product choice. From a strict benefits point of view it is not clear why advertisements should employ images of leafy neighbourhood, or the deck of a sun drenched sail boat. How do we get these things into the model? What happens to them once in the model? Can the model comprehend them in the literal or figurative sense? Are these "benefits", can they be calculated, does the individual take these symbols to be information for product choice? This is where the paradigm finds itself in the presence of endless amounts of anomalous data. I would say in opposition that individuals are constantly examining advertisements for material they can use in their construction projects. Certainly they do find some information here, but it is also true that this is one of their key sources of meaning.

Here too it would appear that the information processing model is reproducing one of the cardinal sins of one of its founding disciplines. This time the offender is not psychology, but economics. What we see being smuggled into the paradigm when it makes the benefits the objective of information processing and product choice is the economic man notion of human conduct. Both Sahlins (1976) and Douglas and Isherwood (1978) have complained about this tendency to the social sciences to attribute a market place rationality to social actors. Sahlins has gone so far as to suggest that even our market place behavior springs from concerns both more complicated and more cultural. Hirschman (1977) notes that the notion of "interest" is a historically created and limited one, and that there was once a time when the term referred to the "totality of human aspirations" (1977, p. 32). The ideas that consumer research has borrowed from economics contain certain limitations that are reproduced even in theoretical elaborations as late and as distant as the information processing model.

Conclusion

As Marshall Sahlins (1976) puts it "every theory makes a bargain with reality." Every theory trades certain kinds of knowledge at the expense of other kinds of knowledge. Or, to put this more forcefully, every piece of knowledge comes at the cost of a certain kind of blindness. This paper has observed that the information processing model is unable successfully to contend with the cultural context and project of consumption. It must be noted however that the meaning-based model is just as unable to contend with certain aspects of the individual's response to the stimuli of advertising. It cannot pretend to do everything that the information based model does for us and more besides. This would be an especially fraudulent advertising claim.

The point I wish to make here is only that there are crucial aspects of the consumption and advertising process that are not satisfactorily treated by the information based model. Moreover, there would appear to be something in the very nature of the model that prohibits it from incorporating this material. If this is so, no mere tinkering with the model will save it from its insufficiencies. Now, if it is also true that the

meaning based model cannot serve as a replacement, what is required is a ground-up construction of new models. The great virtue of this undertaking, aside from the new insight it would give us into consumption, is that it would help make the field of consumer research the producer of its own models. We have been traditionally the clients of other fields, heir to their models and, as I have tried to suggest here, heir sometimes to the limitations of these models. The integration of information based and meaning based models is a project that can take place within the consumer research tradition. It is one of the projects by which we can begin to make ourselves the center of our own theory development.

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BREEDING, TRAINING, AND RIDING:
THE SERIOUS SIDE OF HORSEING AROUND

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Abstract

Through introspection and recollection of a lifetime of involvement with horses the author describes the evolutionary process through which she became committed to the serious side of equestrian competition. Although her interest meets all of the classic criteria of deeply committed behavior, a closer examination suggests that the notions of leisure specialization, utilization and continued investment, and differential motivation may offer additional means for refining the definition of commitment. Another dimension that may distinguish commitment to a sport from commitment to other behaviors is the opportunity for competition. Despite the necessary elements of skill and training in successful performance during competition, reflection reveals some other influences on competitive success that have not been adequately addressed in the literature on leisure or play -- mood and situation as they affect mental state.

Where Did It All Begin?

I learned to ride before I could walk. I had my first horse before I entered kindergarten. I was a horse show regular by age six. There has never been a time since then that my best friend has not been a four-legged "fur person". First there was one who patiently helped me learn to ride. Then one who played games with me-- carting my camping equipment from the front yard to the back yard and carrying my saddlebags full of library books to the bookmobile. There were a couple who gave me a shot at winning in 4-H and Pony Club horse shows. Those "friends" were responsible for getting me into the situation I am in today -- partners in a horse training, breeding, and showing business with ranches in Salt Lake City and Scottsdale on which 24 purebred Arabian horses reside in far more luxury than my partner or myself! My early exposure to horses, though not intentional on my part, has had a profound impact on my life. My interest has survived many changes in my life circumstances-- graduate school, geographic mobility, interpersonal relationships. My involvement with horses has shaped both day-to-day and major life decisions requiring adjustments in other aspects of my life. A recounting of my involvement with horses certainly would not be complete without acknowledgment of those very special "friends" who have influenced my commitment and the activities I find myself engaged in today.

The Transformation of an Avocation: Commitment

Commitment has been a popular explanation for a variety of behaviors (Becker, 1960; Dubin, 1979; Lee and Zeiss, 1978; Buchanan, 1985) and as a result has accumulated a rather amorphous set of meanings. The term is used synonymously with dedication, loyalty, devotion, and attachment. In a recent review article in *Leisure Sciences*, Buchanan (1985) defined commitment to a leisure activity as:

"the pledging or binding of an individual to behavioral acts which result in some degree of affective attachment to the behavior or to the role associated with the behavior and which produce side bets as a result of that behavior."

According to that definition there are three major components necessary for the existence of committed behavior:

1. Commitment requires consistent or focused behavior and implies a rejection of alternative behaviors.

Commitment exists when participation in an activity irrevocably conditions other important aspects of life and thereby produces behavioral consistency. This consistency is observable in patterns of habitual behavior (e.g., upon rising in the morning I start a pot of coffee, dress, go to the barn and feed the horses; by the time I finish, the coffee is brewed) and in rearrangements of other activities (e.g., "dinner time" changes with sunset since I work with the horses until dark; workday and evening activities are always separated by a trip home to feed the horses). Disturbing this consistency by not riding daily, may cause feelings of incompleteness or guilt if I do not spend time with each horse. Some analysts have gone so far as to label this sort of commitment an "addiction" (Glasser, 1976).

Though the direction of influence is not certain, researchers have observed that these habits and feelings are associated with an individual becoming locked into a position and feeling he/she must live up to the promises and sacrifices built into that position. As commitment increases, susceptibility to other influences (e.g., participation in a new activity) is thought to decrease. Thus, commitment may lead to rejection of alternative activities.

Leisure research has given some attention to this narrowing of activity choices calling it recreation specialization (Bryan, 1977). The notion is that participants in a recreation activity undergo a developmental process as the result of their involvement with that recreational activity. This "career" is reflected in changing patterns of skills, attitudes, and desired experiences. Bryan positions occasional participants (who exhibit limited participation) at one end of the commitment continuum suggesting that they have not established the activity as a regular part of their leisure. At the other end of the continuum are those highly committed participants specializing in method (e.g., cross-country vs. downhill skiing) and exhibiting distinct setting preferences (Snowbird vs. Sun Valley).

The concept of specialization is intuitively appealing. In equestrian activities, one may participate in riding, competitive riding, or even more specifically, stock horse competition. Each successive level implies a narrowing of focus and an exclusion of many other related activities. For example, as I began to specialize in Stock Horse competition I had less and less time for jumping and trail riding. The "seat" required for western performance is quite different than that required for jumping. I could not perfect both simultaneously.

An interesting question raised by Wellman, et.al. (1982) is whether commitment is a component of specialization, whether specialization is a manifestation of commitment, or whether the two are mutually reinforcing. The answer to this question awaits an acceptable operationalization of both constructs. Though some researchers contend that objective measures, such as equipment owned (Bryan, 1977) and prior activity participation (Wellman, et.al., 1982) are adequate to assess commitment and specialization respectively, these measures neglect affective attachment, a criterion for commitment discussed further below. There is a movement in leisure research to include introspective research techniques such as phenomenological observation in order to tap into this more personal realm of the leisure experience (Mannel, 1980). It seems very likely that the affective dimension of commitment may actually strengthen and focus chosen behaviors.

2. Commitment is a function of side bets.

Another aspect of commitment that researchers have shown directs the continuation, and even the intensification, of a behavior is the investment in "side bets". Becker (1960) suggests that side bets occur when something of value (originally unrelated to the present behavior) is staked on maintaining behavioral consistency. Although not precisely defined in the literature, side bets represent the investments (financial or otherwise) which have resulted from participation but which are not necessarily related to the actual act of participation.

In the equestrian field a sort of side bet can be made by paying a futurity nomination fee for a foal before it is born or trained entitling it to compete for prize money usually at age three or four. A breeder purchasing a stud fee to a well-known stallion may ensure other behavior consistent with that breeding decision (e.g., joining a promotional campaign conducted by the stallion owner, paying training fees for the foal when born) after placing a side bet in the form of a futurity nomination. This ensures a continuation of, and commitment to, the behavior.

Side bets can also be observed with respect to career choices, job location decisions, even relationships. For example, my decision to pursue my Ph.D. at UCLA was made partially because that enabled me to afford to keep a horse at my parent's house. Having made that side bet, I could not justify ending my involvement with horses while I completed my graduate work.

Researchers have found the concept of side bets to be useful in explaining otherwise unrelated behaviors. But another interesting relationship that has gotten little attention in the literature is that between past expenditures/investments and future behavior. As mentioned above, ownership of equipment has sometimes been used as an observable operationalization of commitment. However, utilization, rather than ownership, may be a more accurate indicator of commitment. For example, a low commitment equestrian may purchase a horse and after a few months lose interest and stop riding. The past sizeable investment in the horse does not condition the current behavior of this person. That is, the equestrian considers the purchase price as "sunk" and hence irrelevant to present behavior. This owner may even fall behind on paying the board bill on the forgotten horse since additional investments in the abandoned activity seem senseless. The fact that the potential service flow from past investments is not consumed may be an indication of low commitment. On the other hand, the deeply committed equestrian adamantly pursues riding that horse. Not only does the deeply committed equestrian consume the service flow from the previous investment but she may undertake additional investments to increase the quantity of the service flow from that horse. Thus, although some researchers conclude that investment indicates commitment, consumption, as well as on-going investment appear to be more indicative of deep commitment.

A personal example illustrates this proposition. My involvement with horses began simply with owning a horse. That led to acquisition of the appropriate clothing, the necessary tack, a truck and trailer to haul the horse around, acreage and a barn to house the horse, both an outdoor and indoor arena to exercise the horse, not to mention the expenses to maintain the horse -- feed, farrier and veterinary services, etc. The horse "has to have" a winter blanket, both a work and a show bridle, several bits for various phases of training, and saddle blankets color coordinated with my outfits. And, of course, as the horse becomes competitive, it "must" not only go to the local horse shows that are within a day's drive, but it "must" also travel to the Regional and National competitions that are several hundred or thousand miles away necessitating my staying in hotels and eating in a variety of restaurants.

3. Commitment involves some degree of affective attachment to the goals and values of a role, an activity, or an organization.

This third aspect of commitment relates to what one "gets" out of being committed to an activity. Researchers have divided the affective component into three general continua: continuance, cohesion and control. These dimensions relate to the inertia of continuing with a known activity rather than taking up a new unknown one, the social interactions available from and the feelings of belonging to an identifiable group, and the self-identity that go along with participation in a particular activity. Motives for participation in various recreation activities have been a focus of much recent research in the recreation area (e.g., Mills, 1985).

Studies have found that the motivations for engaging in a particular recreation activity are likely to vary according to level of participant commitment. Schreyer, Lime, and Williams (1984), for example, report that novice river runners choose that activity "to experience new and different things" and "to show others I can do it" while the motives of veterans relate to achievement, self-worth, and personal meaning.

The ebb and flow of the motivations during my career with horses suggest to me that there are both immediate (e.g., riding is fun) and long-term (e.g., by training hard I can be considered by others as a significant competitor) satisfactions attained through my commitment to horses. Whatever these satisfactions are however, they are transitory. To realize them, the behavior must be enacted over and over and over again. This repetition is observed in behavioral consistency and can be interpreted as commitment (or my some, addiction). When self-concept and participation intertwine, commitment deepens. Consistency of behavior increases as commitment increases since individuals are more likely to reallocate resources than they are to change activities. Thus, commitment tends to make the participant resistant to change (I won't switch expenditures to camping equipment away from riding equipment) or to pursue additional activities complimentary to the primary commitment (e.g., I enjoy country western dancing more than disco dancing).

As witnessed by my allusion earlier to "fur people," another very significant affective attachment in equestrian activities is the horse. As one spends more and more time with an individual horse and gets to know it well, that horse becomes a real friend (as in "man's best friend"). Anthropomorphism is not just a temptation; it is a reality! In addition to one's own self-actualization, there is the horse to consider. What are her needs and wants? Her capabilities and potentials? Does she deserve to compete at the National Championships even if you don't aspire to that goal? Additionally self-identity now encompasses the horse. A compliment on how beautiful the horse is enhances your ego. A slur on her performance is a personal insult. Continued behavior is even more likely since there are now stakes involved for someone else.

Competition's Role in Commitment or "I Like to Win"

As described in the literature on recreation, that illusive "affective attachment" from committed behavior includes those feelings and emotions experienced during the "leisure state" (Tinsley and Tinsley, 1986). Akin in its psychological properties to mystic experiences, peak experiences, flow experiences, and sports experiences, attainment of this most potent and engrossing leisure experience is characterized by a centering of attention, richer perceptions, a forgetting of oneself and becoming totally involved in the activity at hand, a disorientation in time and space, and a momentary loss of anxiety and constraints. Competition, because of its immediacy of feedback and its necessary focusing of competitors' attention, provides a setting in which this much sought state may be more readily achieved.

Extrinsic feedback available from competition appears to be related to the continuation of that behavior. Most of us prefer to do what we are good at and avoid doing those things that we are not good at. Deci and Ryan (1980) report that positive feedback concerning success (i.e., extrinsic evidence that one has performed well) tends to increase self-reported enjoyment, intrinsic motivation, and commitment. When I take a new horse into competition I usually have little expectation of placing. When I finally do earn a ribbon, that extrinsic feedback spurs me on to train even harder. The feedback provides the "hook". That first blue ribbon intensifies my perception of accomplishment and thus my satisfaction and demands even more effort to succeed.

It is important to realize that "winning" will be defined differently at various points in this process. At first the goal may be one's personal best. Extrinsic feedback is not as critical as the opportunity to test oneself and evaluate the performance against one's own past performances. However, a taste of positive extrinsic feedback in the form of a ribbon may shift the goal from a "better performance" to "winning." But ultimately, the desire may be for both a top performance and one recognized as such by others. One must "win" to retain the respect and support of observers (judge, spectators, other competitors) but one must do it in style to retain self-respect. It may be this latter state in which truly committed competitors find themselves.

A Scenario of Competitive Success

The factors influencing success in competition are not well understood. Holbrook, et.al. (1984) report that "Apparently, because of its anchoring in ability and learning, game-playing performance remains insensitive to the effects of short-run emotional fluctuations" (p. 737). They conclude that, success depends primarily upon preparation for the game. Other researchers, however, have suggested that personal and situational factors may affect subjective perception and performance (Unger and Kernan, 1983). The competitive engagement itself may thus impact performance success. A description of equestrian competition emphasizes the role of preparation, mood and situation in success.

Unlike the situation in many individual sports, the equestrian is not really alone. The horse, its suitability, ability, and attitude are at least as important to success as is the talent of the rider. Thus, preparation for competition involves conditioning, training, and practice for both the horse and rider. It is the "team" that is important. Communication and trust between horse and rider are crucial.

Though this training of horse and rider takes an enormous amount of time and effort (a stock horse is not ready for heavy competition until age six or seven and training under saddle usually begins at age three), the mental state, or mood, of the competitor at the moment of competitive engagement may determine the outcome. The mental aspects of competition encompass such things as the strategy or "game plan", pre-performance psych games, and feedback.

The Game Plan. Anticipation of what will occur during the competition, or imaging, is a skill many athletes work to acquire. Imaging allows the competitor to mentally go over the actions of a competitive engagement and to rehearse reactions to various situations that may develop. Having "practiced" in this less stressful pre-competition setting, one is more likely to react automatically without having to think about what to do before doing it.

The individual events I compete in have a prescribed pattern. In Stock Horse, the pattern, although each one contains the same basic maneuvers, differs from show to show and is not revealed to the contestants until approximately one hour before the event is held. Many of the patterns are deliberately quite complex requiring tremendous concentration for proper execution. The

pattern must be memorized so that the "next move" becomes automatic. A slight lapse in concentration may lead to the ultimate disaster of "going off pattern" which is an automatic disqualification. Imaging is of tremendous help in preparing to run a pattern. Mental rehearsal of exactly what one will do in the arena -- imagining each movement of the horse, feeling the acceleration of the run downs, the power of the sliding stops and the speed of the spins, all prepare one for the upcoming performance.

Another event I ride in is Working Cow Horse. This class has a standard pattern required every time. The variables in this class are the consistency of the ground in the arena and the cow (who rarely knows the pattern). Though all the mental preparation required for Stock Horse also helps in this event, probably the most important attribute to success is the rider's ability to modify the game plan on the spot. Things never go according to plan and the rider must think on her horse. Even the most thorough preparation can't overcome a fatal mistake in judgment.

The need to concentrate on the moment is critical to success in both events. The competitor who looks over her shoulder or ponders a mistake may "give up," reducing her competitive determination through the rest of the ride. Such lapses in concentration, or interruptions in the flow, are disastrous. In these situations the competitor beats herself.

Pre-Performance Psych Games. Pre-performance psych games are designed to decrease the ability of one's competitors to concentrate and image effectively. The psych game begins in the warm-up arena. Intimidation by showing off one's best moves in front of a prime competitor is a favorite ploy. For example, spinning time and time and time again, each time faster than the last until you and your horse stagger to a dizzying stop. Unfortunately, this strategy often backfires as the best performances are left behind in the warm-up arena where the judge will never see them.

The position a contestant draws for order of performance may affect his/her ability to psych out the other competitors. If one has a particularly "hot" horse and goes first with an impressive showing, the rest of the competitors may forget about showing their horses and instead focus on "beating" you. They will lose their concentration and likely the competition. Alternatively, if one goes last, all the other exhibitors may have held back some reserve not realizing the competition they were up against. When you pull out all the stops your performance tops them all.

An "innocent" plea for help or idle conversation are other approaches. As your competitor is trying to memorize the pattern you casually ride up asking "Now, was that three spins to the left then take off on the right lead?" Though your question was just "friendly" conversation, your competitor makes a bee line to the show office to check the pattern since he thought it was two turns to the right!

Intracompetition Feedback. The degree to which a competitor has attained that flow state (leisure state, sports experience) described earlier may affect the impact immediate extrinsic feedback has on performance. If "flow" has been achieved, the competitor is likely to be impervious to crowd reaction. But if only approaching that state, the heightened arousal and hyper-sensitivity associated with competition may cause the contestant to be affected by such extrinsic feedback. Consider two extremes. Having studied one's local competitors one goes into a home-town show with an accurate assessment of relative competitive position. The competitor is relaxed and confident. She enters the arena and is oblivious to her surroundings until well after she clears the exit gate following her run. She is totally absorbed in the experience and the surroundings and situation have no impact on her performance.

Now having won at the local level she is qualified for the National Championship show. She knows every other contestant has also passed the test for qualification. She has not personally seen all of the competitors, though she may have seen promotional material on some of them. She is unsure of how she will stand up to the competition. This insecurity hinders her ability to concentrate and increases her sensitivity to extrinsic feedback regarding her performance. She is tuned in to the audience reaction; she has not achieved "flow".

These examples are meant to question the relationship between preparation, performance success, intrinsic and extrinsic feedback, and the attainment to that optimal flow state. Mood and situation may be equally as important as ability to the performance. They may be intervening variables that mediate the relevance and impact of intrinsic and extrinsic feedback. And, thus, they may play a critical role in the attainment of flow, which is one of the affective attachments related to commitment.

Conclusion

Introspection reveals some promising issues for investigation to further understand commitment. Activity specialization, utilization of owned "toys" and continued investments to enhance and use them, and affective attachments generated from different sources may help refine the notion of commitment. In the context of competition, the relationships of mood and situation to performance success, and thus to affect, intrinsic motivation, and commitment to an activity are certainly deserving of research attention.

One fact remains unequivocal, the satisfaction from engaging in an activity is transitory. The activity must be repeated. Over and over and over. Though it is true that most activities are preceded by a period of anticipation and followed by a period of recollection, and it is recognized that the anticipation and the remembering may in fact be more enjoyable than the activity, it is the activity that must be experienced over and over again to attain that peak experience. Is that what makes us addicts to our avocations?

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PUMPING IRON III: AN EXAMINATION OF COMPULSIVE LIFTING

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This paper examines weightlifting as an example of fanatic behavior. As defined here, fanatic behavior is repeated behavior that conflicts with the observer's utility function and any utility function the observer accepts as valid or reasonable. For many, this makes serious lifting a paragon of fanaticism.

Some serious lifters obviously go to great extremes. Consumption of steroids, hours in the gym bulking up, radical dieting, and conflicts with work and personal lives with no real prospect of monetary gain are, in an economic sense, irrational. During 1986, a weightlifting camp at Rider College in New Jersey drew participation from around the world who forfeited salaries and paid \$500 per week for the privilege of working out and listening to serious weightlifters like Tom Platz (a former Mr. Universe), Bill Grant (a former Mr. World), and "Dr. Squat" (Fred Hatfield, who demonstrated his specialty using a mere 800 pounds). Such behavior would even be classified as fanatic by the participants themselves. Here we will concentrate on a slightly less fanatic level, the serious lifter or fanatic fringe.

I don't consider myself a complete fanatic, although I did pass up a free dinner with friends at a French restaurant in Montreal Wednesday night in order to fly back to New York so I could lift Thursday morning before I flew to Toronto. I have also lifted when injured, exhausted (e.g., after other forms of physical exertion such as 6-8 hours of sports), and busy (e.g., at 9 p.m. with 6 hours of grading to do before the next morning) because it was time to lift. Yet by serious lifters' standards (e.g., bodybuilders and powerlifters), my lifting would be considered casual. Still, if not a fanatic, I am probably, at least according to most people's utility functions, a bit aberrant. Consequently the following is at least a partial justification for my behavior. This paper is also very different from those I normally write. There is no mathematical model, mass of data, or complicated statistics involved. Rather the paper relies on introspection and intuition. Hence it may be marginally interesting or provocative, but is in no way argued to be "scientific," at least not in the tradition of logical positivism.

Defining and Identifying Fanatic Consumption

Exactly where rational consumption ends and fanatic consumption begins defies easy definition. In fact, most people assume anyone whose utility function values more of an activity than theirs is a fanatic. Consequently we treat fanaticism as a continuous construct related to strength of and reason for commitment. The reason for commitment is important in defining fanaticism. For example, while one might argue that someone who spends 2 hours a week exercising a single muscle group is fanatic, if the reason is to prevent injury (say, to a neck for a football player) to rehabilitate an injury (e.g., a knee), or to aid in their work, the exercise is clearly a means to an end and not the end in itself. Put differently, a fanatic devotee of anything continues the activity at least partly because the activity is an end to itself. With this in mind, we can uncover fanaticism based on two dimensions: opportunity cost involved in participating and reason for participation.

The opportunity cost is relatively easy to assess and is measurable by the time involved, possibly multiplied by a marginal wage rate appropriate for those hours, plus the out-of-pocket cost. The more inflexible/rigid the time commitment, the more fanatic the participant. For a serious weightlifter, the 300 or more hours spent lifting per year are clearly more expensive than the \$200 annual fee most pay to join a club, plus whatever laundry bills, etc. are involved. The hidden costs involved such as vitamin

supplements and chiropractic sessions often exceed the cost of club membership.

Assessing the reasons for participation is a bit more difficult. For our purposes we suggest a five-category typology (Figure 1). The first category is specific-benefit based, similar to multiattribute (e.g., Fishbein and Ajzen 1975) and micro-economic (e.g., Lancaster 1971; Ratchford 1975) models. In the case of weightlifting, these include benefits such as rehabilitating an injury, getting exercise, or improving strength in order to participate in other sports more effectively. While one can argue about when diminishing returns are reached, it is clear that these are "rational" explanations and indicate the person is lifting as a means to an end.

The second level of reasons has to do with image. Some lift weights because they feel that bigger biceps or tighter abs will impress members of the opposite (or same) sex. Others, the author included, somewhat enjoy the semi-wild, macho image of weightlifters, a healthy substitute for riding a Harley-Davidson. While it is possible to become obsessed with how you look (as the myriad mirrors in gyms encourage), gaining a particular image in return for a few hours a week is not necessarily a mark of fanaticism. Elements of narcissism, a search for eternal youth, and the Puritan ethic of hard work all contribute to the image of a lifter.

The third level of reasons for lifting fall into the category of global liking. This category includes explanations such as "it gives me something to do" and "I just like it." The liking reason in particular is hard for nonparticipants to believe when they observe the pain of exertion during the activity (and largely unintelligible to people who think sweat is to be avoided at all costs). Still, weightlifters get a feeling similar to the so-called runner's high, which is quite enjoyable as an experience (Holbrook and Hirschman 1982).

The fourth level of reasons relate to the activity being the goal itself. This category includes competitive powerlifters whose basic goal in lifting is to lift more. While lifting heavy weights is not high on most people's lists of goals, it is at least an understandable goal and hence what appears fanatic to most may be "rational" to a few.

FIGURE 1

Reasons for Pursuing an Activity

1. Specific Benefits
(e.g., weight reduction, improving strength, rehabilitating an injury)
2. Image Enhancement
(e.g., impress others)
3. Global Liking
(e.g., acquired taste, something to do)
4. Goal In Itself
(e.g., competition)
5. Addicted
(e.g., "because I do")

The final category of reasons relate to addiction. Here participants basically lift because lifting is what they do. Their behavior is literally a routinized response behavior (Howard, 1977). Many don't stop lifting out of fear that they would deteriorate rapidly. To maintain a level of lifting strength tends to require continuously increased effort. Hence lifters are on a treadmill, running faster to make minor gains or even to stay at their current plateau. Even if they cognitively admit that rest would help, they continue to lift. Lifting has become a ritual (Rock 1985), one in which participants in designer outfits are not welcome.

No one starts out to be a fanatic. Rather, fanaticism develops gradually as one moves from the first category of reasons towards the fifth. Extreme brand loyalty can easily be considered fanatic. The old "I'd walk a mile for a Camel", "I'd rather fight than switch", and "If you're out of Schlitz, you're out of beer" slogans actively encouraged such fanatical commitment among customers. In fact, serious lifting is basically a manifestation of strong brand loyalty where the brand is a way of spending time.

Bodybuilding Culture: The Religious Aspect

The word fanatic is often used in combination with another word, as in "religious fanatic". Actually there is a great deal of similarity between proponents of religion and proponents of bodybuilding. First there is the tendency to look down on those who are not members, with a combination of benign condescension ("I feel sorry for those people who are out of shape"), scorn ("look at that pencil-necked geek"), and intolerance ("there is no excuse for being weak and out of shape").

Then there is the adherence to a set of principles. Religion has Korans, Torahs, and Commandments. Bodybuilding has similar tenets. For example, readers of Muscles and Fitness magazine are constantly exhorted to improve. Consider the following phrases of Joe Weider, the publisher and editor and a leading guru of weightlifting in the October 1986 issue:

Strive for excellence, exceed yourself, love your friend, speak the truth, practice fidelity, and honor your father and mother.

We celebrate our sports stars because they embody all the qualities that make survival possible: speed, strength, courage, quick-wittedness, and superb fitness. These superathletes are symbols of an ancient performance, and through them we live our lives according to an ancient, powerful design.

By taking control of your body through fitness you gain a self-assurance that drives you to make all-round changes in your life. You control forces outside yourself in a way that's near mystical. You are able to vaporize mediocrity or any sense of helplessness.

There is an obvious element of proselytizing here, a call to a type of conversion experience. Once converted, one's lifting can be guided by a set of principles more complex than the oft quoted "no pain -- no gain" slogan, for example the "Weider Cycle Training Principle", the "Weider Instinctive Training Principle", and the Weider Muscle Confusion Training Principle". Basically, however, weightlifters value muscle size, the ability to move heavy objects, intensity in workouts, and muscle definition, not necessarily in that order. While strict form in exercises is promoted, there is a strong end-justifies-the-means attitude among serious lifters, as the use of the terms "cheats" and "cheating" suggests.

Like any congregation, health club members have different segments which vary basically in the intensity of commitment as Figure 2 indicates. Perhaps the similarity of religion and bodybuilding can best be highlighted by the fact that the manager of the club where the author lifts, a one-time serious competitive bodybuilder, has been studying to become a minister. As Williams (1962) said,

"The person whose religious awareness is strong has in his life a sense of direction and purpose."

For some, lifting provides a direction and purpose.

A Pilot Survey

Trying to capture fanaticism on 5-point scales is probably a hopeless task both because fanatics are generally uninterested in participating in surveys and because much of fanaticism is non-cognitive and hence capturable by whole images rather than a collection of aspects. Nonetheless, partly because the author feels uncomfortable without data and numbers, an attempt was made to pilot test a 5-page survey to assess attitudes toward weightlifting. A sample of 12 members of a club best described as in between a status club (replete with juice bar and tanned, smiling instructors and gleaming machines) and a hard core gym (replete with the smell of liniment and sweat and a preponderance of free weights) was obtained. Three more questionnaires were handed out but never returned: two recipients left to join a more serious gym and the third, probable the most fanatic lifter (I've had to help him get in position to lift when his back was too sore for him to do it himself), never got around to finishing it. The remaining 12 seemed remarkably happy to fill out the survey, suggesting perhaps that they are generally members of the serious but not fanatical category. Or more likely, they didn't want me to drop the weight the next time I "spotted" for them during an exercise.

FIGURE 2

Characteristics of Members of Congregations and Health Clubs

Segments	Characteristics
Social Belongers	Occasional Attenders Observers of Surroundings Concerned about Attire
Serious Proponents	Regular Attenders Functional Dressers Like to Concentrate, but Willing to Talk
Fanatics	Completely "into it" Assume the Church or Club is Theirs Reaction to Non-Serious: 1) Ignore or 2) Belittle Use Special Clothing

The twelve male respondents can best be described as serious if not fanatic lifters. They lift between 3 and 6 times per week for between 4 and 13 hours, but only 2 are involved in power lifting. Nine do forced reps or negatives at least half the time, but nine have also never lifted seriously before. Only one also runs over ten miles per week (guess who), and none participates seriously in aerobics. Eight participate in team sports versus only three in racquet sports. Demographically, all but one have had some college education and are generally in their 20's. Ten of the twelve rate themselves as competitive and as successes in their jobs.

In terms of the reason for beginning and continuing to exercise, average importances on a five-point scale are given in Table 1. Physical appearance is the main reason for both beginning and continuing to lift, and the exercise involved and general feeling are also important. Specific benefits such as sports performance and injury rehabilitation are less important, and the respondents do not believe lifting will lengthen their lives. The addictive nature of the activity is demonstrated by the importance of habit in the decision to continue lifting and the fact that three respondents (25%) gave the importance of "afraid to stop" a 5 on a 5-point scale. Five respondents indicated that they "can't stand to miss a workout", four were willing to risk injury to improve their bench press and squat by 100 pounds, eight agree that a good workout has to lead to pain and fatigue, four work out even if they have an injury, and six admit that others think they are fanatics about lifting.

TABLE 1
Importance

Reason	Importance	
	For Beginning To Lift	For Continuing To Lift
Getting Exercise	3.58	4.17
Improving Performance in Sports	3.67	3.33
Improving the Way You Look	3.92	4.33
Being with Friends	2.50	2.75
Making New Friends	2.17	2.50
Rehabilitating an Injury	2.50	3.08
Relieving Stress	2.83	3.25
Feels Good		4.00
Habit		3.67
Afraid to Stop		2.83

What do these results prove about lifters? Nothing. However, combined with intuition they lead to some interesting propositions:

1. Lifting usually starts with a specific purpose in mind, but the reasons for continuing to lift are often quite different. At some point the activity becomes addictive and only a serious shock (e.g., loss of employment, getting a new job, moving, or a serious injury) will lead to reevaluation of the benefits of lifting.
2. Fanaticism benefits from support groups. While the rest of society may not understand, the enlightened (crazed?) few one lifts with (or the video or TV show watched) tend to insulate one from the carpings of others.
3. Serious lifters believe they are superior to non-lifters. The feeling of superiority, rooted in a survival of the fittest past, is a powerful motivation to continue lifting.
4. As in religion, recent converts are likely to be more fanatic than those who have been involved for other reasons (e.g., because a coach required them to). This is because often they have been searching for something to commit to for a long time.

Personal Reflection

Serious lifting, at least for me, does not stand up all that well to careful cognitive evaluation. It seems counter to the long-standing tradition of man to use beasts or technology to reduce physical strain. While it helps my tennis, skiing, etc., the improvement is only marginal, and the attained level far from exceptional. Consequently I tend to suspend cognitive arguments and rely on self-image, the approval of support groups (fellow

lifters) and the feeling of a good workout to justify lifting. To quote Joe Weider,

"Getting in shape is a rebellion against being mediocre. By nature we all have the desire to be number one. Perhaps we will never be. The point is, we can make the effort, and no effort in life is ever lost. We have it within us to be the best we can be. We hark back to the driving forces of ancient survival. That fulfills our obligation to excellence. We owe it to our past, our country, and ourselves."

Summary

In discussing fanaticism, it is possible to rely on the words of others. Rather than say that a fanatic is a person whose continued participation is based on almost blind faith we could say,

"A fanatic is a man that does what he thins th' Lord would do if he new th' facts in th' case." -- (Dunne, 1900)

One could define a fanatic as one who, once "hooked", repeats a behavior even when evidence suggests it is "no longer optimal". Alternatively, one could say,

"But Faith, fanatic Faith, once wedded fast, To some dear falsehood, hugs it to the last." -- (Moore, 1817)

The essence of fanaticism, however, is not that others think it odd, but that even the participant himself cannot recall exactly why he is participating. Put differently,

"Fanaticism consists of redoubling your efforts when you have forgotten your aim." -- (Santayana, 1905)

If you'll excuse me, I have to go work on my peccs.

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COMPULSIVE CONSUMPTION

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Abstract

Recently, psychologists have begun to realize that spending can be a compulsive behavior similar to gambling, food disorders and alcoholism. However, to date, virtually no published literature exists about this form of fanatical consumption. This paper discusses how compulsive spending fits the etiology of compulsive behaviors and describes the different ways compulsive consumption can be manifested.

Introduction

For most people a large part of consumer behavior is simply a part of their everyday routine. Only unusual, special or major purchases stand out as being particularly significant to the typical consumer. Many consumption activities receive little thought and require little involvement. Even fanatical consumption by enthusiasts, collectors and cognoscenti is typically limited to a small number of consumption objects or areas. To some individuals, however, consumption itself can become particularly central and deeply involving. It can have major, often severe, implications for many aspects of their lives. In these cases, consumption becomes dysfunctional, and is often typified by a compulsive quality.

This paper attempts to call attention to this dysfunctional form of buyer behavior, discuss some of the major concepts and issues involved, and report some very preliminary research findings on the topic. Unfortunately, there is virtually no published research on the problem of compulsive consumption. Therefore, to accomplish the goals of this paper we have to rely in large measure on anecdotal accounts, as well as observation and participation in self-help group discussions with credit abusers, and the results of a small pilot survey.

The subjects for the pilot study were 23 people attending meetings of a San Francisco based self-help support group. The respondents had been members of the group for differing lengths of time ranging from three weeks to over a year. The majority were women (19 women and 4 men), and most were in their thirties and forties (78.2%). Approximately half of the respondents were married (47.8%), 30.4% were single and the remaining 21.7% were divorced or separated. Annual household income varied greatly among the respondents ranging from one person who earned under \$10,000 a year to three respondents who reported household incomes of over \$100,000 a year. The majority of the respondents had yearly household incomes of between \$20,000 and \$50,000.

General Description

When we use the term "compulsive consumption," we are speaking about a type of consumer behavior which is inappropriate, typically excessive, and clearly disruptive to the lives of individuals who appear impulsively driven to consume. The person who buys several identical sweaters in different colors because he simply "has to" or because, "I felt good in it," even though he knows he cannot afford to pay for it, is a classic example. Even though the consequences may have severe effects on his daily life, the compulsive consumer buys anyway. As a result, normal activities such as opening the mail or answering the phone take on new meaning. For many compulsive shoppers there is a constant fear of being confronted by another large bill, or angry creditor. Many try to hide both the bills and the items purchased for fear of being discovered. In some instances, people have even engaged in criminal activities in order to pay for their bills and maintain their line of credit.

The behaviors of the compulsive consumer seem fairly similar to common manifestations of addictive behavior. However, the definition of the term "addiction," is a debatable point among clinicians. For some, addiction may only refer to substances, and require the presence of the physiological habituation and abstinence syndrome. Because of this controversy, we have chosen to use the term compulsive rather than addictive consumption.

Characteristics of Compulsive Behavior

The literature suggests that there are a number of cardinal features common across different types of compulsive behaviors (Anderson and Brown 1984; Miller 1980; Russell 1979). These include physical and/or psychological dependence on the substance or activity, as well as occasional loss of control regarding the behavior and subsequent interference with normal life functioning. Other commonalities include the presence of a drive, impulse or urge to engage in the behavior; denial of the harmful consequences of continuing the behavior; and repeated failure in efforts to control or modify the behavior. The compulsive behavior is often used as a means of coping with stress, escaping demands and pressure or to overcome unpleasant emotions or situations. Often a lowered sense of self worth is present. Anecdotal evidence and our preliminary research indicates that these characteristics are generally present in compulsive spenders.

Compulsive behavior can sometimes involve psychological dependence. Psychological dependence is a rather elusive clinical term generally reserved for substances. However, it has been used in the context of behaviors such as work, exercise, and sex. In such a context, the dependent individual predictably turns to a behavior like work in response to some environmental stimulus such as an interpersonal difficulty.

In our research, we encountered behavior which was certainly suggestive of psychological dependence. Group discussions with compulsive consumers often revealed a seemingly inappropriate consumption response to various situations. The stimuli precipitating this varied from shopper to shopper, but the buying responses were fairly similar. The language employed by these individuals was also very suggestive of a dependency. They would commonly refer to the shopping response as "a need," or something they simply "had to do," in response to something else in their lives.

A behavior is considered compulsive when it results from compelling impulses or urges and is inappropriate or disruptive (Ullman and Krasner 1969). Interviews conducted with compulsive consumers typically contain accounts of shopping sprees in which they described themselves as being completely "out of control," buying things they didn't need and sometimes couldn't even use. These behaviors were said to be precipitated or accompanied by an irresistible urge to buy. Respondents frequently expressed confusion and considerable frustration at their inability to control this urge. They often spoke of situations where the urge to buy was just too powerful to resist, and how it was as if something were controlling their actions. This response is typical of compulsive behavior in that it involves the notion of an "ego-alien" force, or an external locus of control. According to Carla Perez, M.D., a psychiatrist who has treated many compulsive spenders, "The compulsive shopper doesn't just shop--she must shop." (Jacoby, 1986, p. 319).

Technically, a behavior is not classified as truly compulsive if it is ego-syntonic, or "consonant with the immediate wish of the individual" (American Psychiatric

Association 1980, p. 291). If there is "pleasure, gratification or release at the time of committing the act," the behavior would instead be termed "a disorder of impulse control" (American Psychiatric Association 1980, p. 291). The extent to which "compulsive consumption is ego-dystonic or ego-syntonic is still unknown. In many cases it does seem more to follow the true compulsive model and be the result of involuntary thoughts which "invade consciousness, and are experienced as senseless and repugnant" (American Psychiatric Association 1980, p. 235). However, in some cases the act itself does appear pleasurable, at least initially. This distinction may eventually prove to be an important diagnostic and research criterion. For now, however, we will use the term "compulsive consumption" to apply to both situations.

For many, if not most compulsive purchasers, buying is a reaction to stress or unpleasant situations. One section of the questionnaire that we administered to compulsive consumers asked them to complete a number of sentences. One sentence fragment read, "I am most likely to buy myself something when . . ." Among our respondents, 43.5% completed this sentence by giving a negative emotion such as "I'm depressed" or "feel bad about myself" as their first response. An additional 30.4% talked about negative feelings as some part of their response although not the first thing they mentioned. Belk (1985) used this same sentence fragment in his study of materialism across three generations in families. In his study, only 20% of the respondents completed this sentence by mentioning any type of emotional state (either negative or positive) or by mentioning impulse purchases.

Compulsive consumers' use of shopping as an escape from unhappiness can also be seen in the responses to the following sentence completion question used both in our study and by Belk: "When I don't feel good about myself I'm likely to . . ." The major responses that Belk reports are: "act depressed" (32%); "try to feel better" (25%); and "withdraw from others" (20%). Unfortunately, he does not indicate what types of answers comprise the remaining 22% of the responses, so we don't know what percent involve buying behaviors. However, the likelihood is it is very small. In our sample, "spend money/shop" (30.4%) was tied with "sleep/withdraw" (30.4%) as the most common response. Thus, it seems that for at least some compulsive shoppers buying is a predominant way of coping with unhappiness.

Group interview responses also supported this notion. Almost all respondents at some point linked an affective or mood state to their compulsive behavior. Interestingly, however, it was not always a negative one. Some respondents experienced the presence of this powerful urge to spend excessively when they were elated. This is somewhat suggestive of an affectual state relationship, as well as a more simple arousal model.

Other characteristics of compulsive behavior deal with the negative consequences of the behavior and the desire and difficulty of trying to quit. Even though the compulsive behavior may lead to unpleasant consequences and interfere with one's life, the individual persists in this behavior. Based on anecdotal data and our pilot study there seems to be little doubt that this is true of compulsive consumers.

Interviews revealed a wide array of negative consequences associated with the compulsive behaviors. These ranged from grossly over-extended credit lines to forced sales of property and even writing bad checks or embezzling money to cover debts incurred during shopping sprees. Interestingly, many respondents perceived these acts as desperate, and "unlike" themselves, but had sometimes repeated them several times.

While compulsive consumers may sometimes gain pleasure or excitement from the act of buying, several of them indicate that they get little enjoyment or use from the things they buy. Some people state that after buying they were so afraid that someone would find out (usually their

spouse) that they hid their purchases in the trunk of their car or in a closet and never used these things. Others reported buying so many things that they never got to use all of them. One question we asked on our survey tried to get at the degree to which this occurs. We asked the people to respond on a five-point scale going from "strongly agree" to "strongly disagree" to several statements. One statement read, "My closets are filled with still unopened items." While no comparison exists from a general population, it is considered unlikely that many people would agree with this statement. Among the compulsive consumers, however, 43.4% either strongly or somewhat agreed with it.

Both the fear of being discovered and the reality of spending beyond their means interferes with the lives of many compulsive spenders. Almost all report some feelings of guilt and anxiety over their behavior. It is, perhaps, this reaction to buying which most clearly distinguishes compulsive consumers from other shoppers.

The fear and guilt associated with buying was evident in responses to another sentence completion question we used, which began, "When I use my credit card . . ." Many respondents naturally finished this sentence with some reference to spending more than if they paid cash (27.3%), or feelings of power or importance (13.6%). These responses would probably also be common among non-compulsive consumers. More interesting, however, was the number of people who completed this sentence by mentioning either feelings of fear/anxiety (18.2%) or guilt (18.2%). For these people, it would seem that buying is not totally an enjoyable activity. Thus, based on our preliminary research it appears that compulsive consumption matches most, if not all, of the characteristics associated with compulsive behaviors.

Incidence

Since compulsive consumption is just now being recognized as a problem and many compulsive spenders may be unaware that they have a problem or deny that it is a problem, a good estimate of its magnitude is unavailable. However, mounting evidence from different sources indicates that this may well be a large and growing affliction.

We can look for indications of the number of compulsive spenders from both subjective and objective sources. Subjective measures come from the number of people who report themselves as being compulsive spenders or who are seeking help from one of the few available support groups. These numbers are likely to be deflated because many compulsive spenders may be unwilling to admit the problem (even to themselves) or are unaware of places to go to seek help. Nonetheless, growing evidence indicates that there are many people who desire help for this problem.

One source of help is Debtors Anonymous, a self-help group patterned after Alcoholics Anonymous with chapters in several cities. Chapters are generally loosely organized by volunteers and most do not appear to make much effort to publicize their existence. Still, they estimate their membership to be approximately 4000 and they are adding new chapters at the rate of about 5 a month (Mundis 1986).

Another organization devoted to helping compulsive consumers is Spender-Menders. While to date, Spender-Menders only has chapters in and around the San Francisco Bay area, they have a file of over 5000 people from all over the country who have contacted them asking for help.

A final indication comes from a leading women's magazine that asked readers who thought they were compulsive buyers to write in. Within just a couple of weeks, over 1600 readers responded.

While these subjective indications would suggest that there are many people suffering from the affliction, other indicators suggest that the extent of this problem

may be even greater. Although not all people who are in serious debt are compulsive consumers, it is likely that some percentage of these people are. Objective measures show that the number of people in serious debt situations is rising (Rice 1979; Raske 1979). Credit experts consider a ratio of debt to take home pay beyond 20% (not including mortgage payments) to be a dangerous level of debt. A recent estimate indicates that in America, the mean debt to take home pay ratio has now reached 19.4% (Groves 1985); and it must be remembered that not everyone has consumer debts. Raske (1979) estimated that 25% of families have no consumer debt and that 45% use less than 10% of their income to retire their debts. Thus, he concludes, the remaining 30% must be devoting between 35 - 52% of their income to pay for past purchases. While some people undoubtedly find themselves in this situation because of economic necessity or poor money management skills, some proportion of them may have reached this predicament because of a buying compulsion which has led to credit abuse. One of the important first steps in studying this problem will be to develop conceptual and operational definitions to identify and separate people suffering from compulsive spending from those having financial difficulties for other reasons.

Typologies

As is the case with so many other forms of behavior, no one typology seems completely appropriate. If there is some commonality among compulsive spenders it may be that they have a low self-esteem, and that they spend much of their lives trying to please other people. These two related characteristics are almost always mentioned by people working with compulsive consumers and credit abusers.

One of the biggest stereotypes regarding compulsive spending is that it strikes mainly women. However, many experts disagree with that belief. They believe that men are as susceptible as women to compulsive consumption, although it may be somewhat more common in women because women are more likely to have been socialized to derive pleasure from shopping. Women are also thought to be more likely to admit to this problem than men and thus it may be more apparent among them since they seek help at a greater rate. According to Sandi Gostin, director at Spender Menders, half of the phone calls received are from men, but only about ten percent of them actually follow through and get help.

While both men and women suffer from compulsive spending, it tends to manifest itself differently among them. Women tend to spend more on clothes and jewelry while men seem to spend more on cars and electronics. However, it may be that these different products actually serve the same goal--to bolster self-esteem. For women, a large part of their self-esteem has been socially conditioned to be derived from how they look. Clothes and jewels may help them feel more attractive or successful. Men, on the other hand, are traditionally rewarded for possessing expertise and/or wealth. Being an innovator in new electronic gadgets (VCR's, PC's, stereos, etc.) may give some men a feeling of being knowledgeable, and therefore important, while cars serve as a symbol of wealth, status and power. In each case, however, what the compulsive spender may really be trying to buy is an enhanced self perception.

While the above descriptions may be common, compulsive consumption like other compulsive behaviors tends to manifest itself in many different forms. For example, not all compulsive spenders buy for themselves. Some mostly buy things for other people. Many seem to use purchasing to relieve anxiety or unhappiness, but some seem compelled to spend simply to get rid of money. They may be driven by a feeling that they are undeserving of wealth or because having money conflicts with their self image. Still others seem to spend the most when someone else says they can't. They may be rebelling from external controls being placed on them.

While profiling compulsive spenders would be an important task, it is unlikely to be an easy one. If it is possible at all, it is likely to require several different profiles or typologies rather than just one characterization. The dimensions which seem most important to include in building these typologies are demographics like age, income, sex, and marital status, as well as purchase characteristics such as what types of things are bought, when they are bought and for whom they are purchased. Still, this task may prove just as problematic and elusive as it has in the case of other compulsive behaviors.

Etiology

Along with determining the size of this problem and describing the different types of compulsive consumers, it is important for us to begin to determine what causes people to become compulsive spenders. This may prove to be the most difficult task since little agreement exists in psychology as to the underlying causes of compulsive behavior.

Many theories have been proposed to explain the etiology of compulsive and addictive behaviors. Most theoretical models focus on biological, psychological or sociological causes. Biological models suggest that there may be a genetic predisposition to compulsive behaviors. In the fields of alcoholism and drug dependency there is increasing support for this viewpoint. Some researchers have suggested that compulsive behaviors may be due to varying brain activity. For example, Milkman and Sunderworth (1983) suggest that compulsive gambling is an "arousal" mode of gratification which effects neurotransmitters in a similar way to amphetamines and cocaine. Other researchers have hypothesized that individual differences in cortical arousability may be a determining factor (Anderson and Brown 1984). Still other researchers are examining the effects of individual differences in endorphin levels in various types of addicts (Blaszczynski et al. 1986). These data, while not definitive, are suggestive of a neurological substrate for compulsive behaviors.

Psychological theories and models suggest that compulsive behaviors relieve stress experienced by the individual from pressure to perform or succeed at tasks or caused by low self-esteem. Sociological models suggest that compulsive behaviors stem from peer pressure or from beliefs about cultural norms. These models suggest that society in general, as well as important subgroups, condone and may even encourage some of these behaviors. Until recently in the U.S. this was true for alcohol and smoking and, to a lesser extent, gambling and drug use. The media also contribute by glamorizing these behaviors in entertainment works and commercials, or by making them appear to be expected behaviors.

Most likely, some factors emanating from each of these different theories play a role in contributing to compulsive consumption. The possibility of a chemical or neurological connection was accidentally touched upon in our discussion with compulsive spending groups. In one group, a person mentioned her enjoyment of speeding down the highway in her car. Several other people spontaneously and enthusiastically agreed. Somewhat surprised by this reaction, we brought the topic up with another group of compulsive consumers. While some members agreed, one person vigorously rejected this idea. After a slight hesitation he said he preferred parachute jumping. Surprisingly, two other people in the group (out of about 10 total people) said they also parachute jump. While hardly conclusive, the disproportionate incidence of thrill seeking behaviors is at least somewhat supportive of the notion that compulsive behaviors may be partially caused by a lack of some chemical produced by excitement or stimulation. This fits well with notions of "type-R personalities," and sensation seeking (Zuckerman 1979).

Support for psychological and sociological bases for this problem also exist. Most of the people who have worked with compulsive spenders and credit abusers report that these people generally have low self-esteem. Compulsive consumers themselves often believe the roots of their problem go back to their childhood. However, there is little congruity over just what types of early consumption behaviors may cause the problem. Some people feel it stems from not having any money of their own to spend when they were young. Others attribute it to not having any controls placed on their spending. Again, while there may not be one uniform type of upbringing which leads to compulsive consumption, some investigations into childhood consumption activities and parental rules, communication patterns and behaviors may be worthwhile.

The final area which deserves attention is the role of advertising and the mass media. In discussions we had with compulsive consumers, most felt that advertising did not play a major role in their problem. They thought that it was other factors which triggered their need to buy. However, it is possible that advertising and the mass media have a less overt role in promoting this problem. They may contribute to the belief that happiness can be found through consumption. Thus, while advertising and media presentations may not directly cause or trigger this problem, they may encourage people with low self-esteem to manifest their problem through buying.

Additionally, advertising for one particular service may play an important role in compulsive consumption and credit abuse. This is advertising for bank cards. Up until recently, almost all of these ads appealed to desire for status and the belief that, "you can have it all." Compulsive consumers are likely to be particularly vulnerable to these appeals. This particular service can cause serious problems since bank cards allow compulsive consumers to run up huge debts. It may not be just coincidence that the problem of compulsive consumption has become more noticeable with the rapid growth in the bank card industry (from about 20,000,000 cards in 1970 to over 150,000,000 in 1985).

It is in the interest of both people who suffer from compulsive spending and society in general to try to reduce the incidence of this problem. For society, compulsive consumption and credit abuse increase the amount of bad debt and drive up interest rates, to say nothing of the human misery it can cause. For the compulsive spenders themselves, this problem can become a nightmare which overwhelms all other parts of their lives. In both our study and Belk's, there was another sentence completion question which started, "The one thing which would make me happiest at this point in my life is . . .". In Belk's investigation, 15% of the respondents mentioned money or financial success. Among compulsive consumers, 56.5% said, "no more debts" was the one thing in life which would make them the happiest, and an additional 8.7% said "more money."

One of the most important questions which needs to be answered is whether compulsive consumption is both quantitatively and qualitatively different from societal norms. This is a central issue in many so-called abnormal behaviors. Many of us experience positive feelings and gratification from shopping and purchasing. At what point does this enjoyment become abnormal?

As consumer researchers it is important that we study and understand the dysfunctional aspects of consumption as well as the advantageous. Compulsive consumption is particularly important to consumer research in that it is not simply a negative side-effect of some marketing effort such as misinformation or even outright deception. For these individuals, consumption has an abuse potential very much as if it were a substance. Whereas consumer behavior has examined a few of the negative consequences of marketing efforts, it is now time to examine the consumption experience itself in these terms.

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THE HISTORY OF ADVERTISING ARCHIVES:
CONFESSIONS OF A PROFESSIONAL PAC-RAT

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We are all embedded in an environment dense with advertising that most citizens find intrusive or aversive. Yet many people, including myself, voluntarily seek, acquire and collect additional advertising items and information. Among collectors, dealers and museum personnel, we are known as "pac-rats", "pac" being an acronym for paper and advertising collector.

There are many pac-rats with varied interests. Some collect particular objects, such as postcards, toys, beer trays, paperweights, etc. Some collect diverse items for a particular brand, such as Planter's Peanuts or Coca Cola, or for a product class, such as railroad memorabilia. Some retain items for a specific era. Some collect anything with a particular theme, or using certain characterizations, as in ethnic stereotypes, the Dionne Quintuplets, indians, movie star testimonials, etc. All collectors soon find themselves having to choose a specialization to provide a rationale and a limitation constraint to what they will collect.

While there may be no such thing as a typical collector, for the species is very heterogeneous in demographic dimensions, and perhaps psychographic dimensions as well, this confession and self description is provided in faith that it might illuminate the behaviors, motives, purchasing behaviour of collectors, by providing a case history of one.

Scope

Advertising completely infiltrates my life. It is an intellectual preoccupation dominating most of my teaching, reading, research, and professional writing. It is a hobby of mine to collect unusual advertising items of previous eras, "advertiques." It is a dominant decor theme to my office and home, providing decoration for almost every room of the large home I share with tolerant others. For example, the kitchen is filled with food related ads and items, including many tools, dishes, cups, bowls, etc. The hall and front room display 19th Century patent medicine items with an indian theme. An upstairs room contains objects and ads for Acme firms around the world. The staircase contain a gallery of faces, "our satisfied customers," which also includes many ads, such as old trade cards. Like the proverbial iceberg, only a fraction of what I have is displayed, so closets and draws are full of additional items.

I watch television items related to advertising and marketing topics whenever I can. I read the trade press of advertising. From both TV and print, I copy ads that seem noteworthy, and collect a random sample for future research purposes. I wear advertising of my clothes in patches and pins, or silkscreened shirts. My pockets are often filled with unusual items such a pen knives, watches, coins and cards of a promotional nature. My photography even as a tourist focuses on signs and advertising, especially the uniquely North American, the ironic self-captioned snaps, and any Acme businesses which I see as the grass roots of American enterprise.

As a collector, I will buy books for libraries, unusual specialty items to show their diversity, patent medicine items (particularly 19th Century), anything for an Acme firm, quality items that can be incorporated as part of my wardrobe, examples of popular adoption of commercial themes, such as brand name needlepoints, and anything that illustrates a juncture of history or might serve as a prop for teaching by relevance to teaching cases or demonstration of basic principles, or the violation thereof.

As specific illustration, I have purchased within the month preceding this writing the following: a nineteenth century letter opener advertising itself as an advertising specialty item; a fruit crate label for "Visitor" brand lemons which I framed and put into the guest room of my Lodge at the Lake, a recreational retreat; a pair of home almanacs for Watkins products, a large product line of domestic and cosmetic items, richly illustrated with one showing the traveller salesman in a horse drawn carriage and the next year's showing him in a Model A Ford; a group of buttons and pins including one for Davey Crockett Bread which I wear on western styled clothes; a cutting board featuring a brand name of mushrooms; and a set of soup tureens whose design is based on old versions of the Tabasco and oyster can labels.

In support of scholarly activity, I maintain a large library of advertising books, periodicals, dissertations, working papers, tear sheet files. I shop second hand bookstores regularly looking for anything on advertising I don't yet have, including coffee table books, biographies of questionable veracity, etc. and have been known to spend an entire day scanning shelves of the largest bookstores in North America. I schedule a day into every visit to New York, for example, to do nothing but shop for books.

The Seed Crystal and How It Grew

A behavioral pattern as diverse, and yet coherent, as this had to start somewhere. As a child, I recall a few small collections. While others collected baseball cards or stamps or coins, I for a while had a small collection of matchbook covers, provided by my parents who both smoked and travelled. Later I collected decals from family trips, that covered a window of my room. But these early efforts were abandoned as I grew and I was indifferent to their disposal.

When near the end of my graduate school days, and recently married, I honeymooned in New England and noticed a peculiar patent medicine cardboard poster with the key slogan of "Step right up and get a bottle of (sic) your druggist." This captured my attention, and being newly married and about to start a teaching position in Marketing, I had both office and apartment walls to fill with decorations. So I bought it. (I neglected to buy the companion ad for the horse elixir, an apparent repackaging of the family elixir, much to my persistent subsequent regret.) I started teaching in the midwest and noticed that anachronistic patent medicines still graced the shelves of many stores, specially the smaller rural or ethnic markets. I bought a few of these off the shelves, only to note that despite diverse labels, many were sold by the same distributor/manufacturer. Writing to them, I received a large variety of items that they still marketed, having bought up licences of old fashioned products to "milk" them in the marginal markets. To identify myself to sellers, I created a business card for "Dr. Pollay's Pill and Potion Parlour -- Palliatives and Panaceas for Palpitations, Petulance and Piety."

As I was teaching both Marketing and Social Psychology at the time in a business school, I was interested in the local histories of the patent medicine pedlars whose techniques of persuasion might provide insight, I thought, into contemporary tactics. Thus I began to read casually about pioneering pedlars, medicine shows, and larger caravans and carnivals. This continued, largely in parallel to my reading for scholarly and teaching purposes. I also began, modestly at first, to purchase those items that made good conversation pieces and teaching vehicles. The

reading and collecting continued for nearly a decade with little professional import, being a related hobby but not leading to much publication, display or impact on others in any way.

The first major reinforcement of this activity, aside from the curiosity of colleagues and friends, came from the Vancouver Art Gallery. I was asked to "hang" a show on advertising though the ages to accompany other shows they had scheduled featuring pinball machines and press photography, thus giving over the gallery entirely to popular culture items. This was both a honor and an exciting activity, for I undertook the curatorial effort with enthusiasm and creativity. Rather than just hanging objects on the walls, I created a variety of environments to recreate the sense of proliferated commercial media. I also produced the show as if it were sponsored, a satire on the intrusion of tobacco and alcohol sponsors into sports and the genesis of the fictional Acme Delivery Company. Opening ceremonies were conducted like a grand opening sale, with students acting as sales force to confront gallery patrons and displayed items bearing catalog numbers.

This experience, an exhilarating change of pace from routines of professing, came at an opportune moment for I was about to embark on my first sabbatical with little certainty if I wanted to dedicate my life to academic activities at all, despite the appearances of success in my first decade at it.

My first sabbatical was therefore a critical moment. As it began I could easily imagine dropping out of academic life and doing something different - anything different. I had the fortunate opportunity to attend Harvard as an International Visiting Scholar where I could study business history and make use of the deep resources of Baker Library. This led to a rededication of effort, a credibility as a scholar with historical interests, and the basis for a reference book annotating the available literature of advertising, Information Sources for the History of Advertising (1978). Returning to my own campus, I created the History of Advertising Archives, as a repository for my growing library and collections, and in hopes that it would someday attract donations of corporate advertising records, which are poorly preserved by any other institutions. (Neither agencies, nor clients, nor trade associations, keep historical records of any quality on advertising). The creation of this institutional form provided a legitimization for a renewed effort at collecting, especially of those items of interest to scholars and researchers.

Purchasing

Initially I would acquire many items quite readily at local garage sales, flea markets, estate sales, second hand stores, and antique dealers. By the initial indiscriminate collecting soon became infeasible. Collecting of advertising related items became quite popular in the early 70s and drove prices upwards. My own inventory became bulky. I recognized that some of what I had bought no longer interested me, and that my collection had no focus. All collectors discover the need to specialize as their collections grow, and I did too.

Thus over time, my purchasing became far more selective. To avoid outrageous prices, I started to avoid the obvious, such as Coca-Cola or Disney items which had become rapidly inflated in price. I buy with an eye toward the aesthetics of design, particularly the typography and printing quality. I am willing to buy reproductions, since I consider this a moot point as advertising is produced in multiples to begin with, although I am demanding as to quality or printing and manufacture and avoid shoddy goods. I seek items that are good conversation pieces, permitting me to tell a story from advertising's history. (Interestingly, many collectors are very ignorant of this history and don't recognize these items for what they are.) I buy items which are easily stored,

or durable. I buy unusual items for their very uniqueness. I buy items that can be put to good use, such as a Campbell Soup instant lunch appliance which heats my coffee. I like items whose branding or slogans is self-captioning, ironic or particularly appropriate, such as my coffee cup shaped like a battery labelled "Energizer." I also like items that are cheap. I am willing to pay fair value, but must watch my cash flow. In general I only buy when several of these criteria are met. Recent acquired illustrations include a "Ritz-watch" whose childlike pun appeals; a "Takoma Biscuit" pin, a early 20th Century competitor to Uneda Biscuits, the cornerstone to Nabisco; and a WWII playing card featuring a Coke ad and silhouettes of airplanes to train air raid wardens.

I still buy largely from the informal markets: garage sales, church rummages, second hand stores, etc. Lately, as another example, I have been buying T-shirts and caps from these places.

I occasionally attend the larger "shows" or "conventions" of dealers or collectors. The mere existence of these shows the size of the collectors marketplace, and any one show has so much material that a high degree of selectivity and a trained searching eye is essential to get through the available inventory. I trade at these places in an anonymous manner, but even if I identified myself and the institutional reason for my interest, this would mean very little to the sellers. It would convey no status of import to them, for there are many private collectors with far greater reputations and collections. (A local man in Vancouver has over ten thousand Coke items, such as boxes of promotional records, rooms of toys, etc.) The shows on the West coast are relatively modest compared to those on the East coast where there is both more original inventory and a greater number of collectors. There is an annual trade gathering in Maryland, for example, which is open to the public but is primarily a wholesale market where antique dealers buy in bulk from one another. Imagine, hundreds of exhibitors and buyers all dealing in volume transactions involving old paper and advertising ephemera which they then filter out to their regional markets. This is where a find such as 200 posters from the 1920s can be marketed.

Motivations

Why engage in this behavior? The behavior seems bizarre to many, a relatively unique monomania. To some the behavior is sufficiently unusual that they are shy to ask what motivations and satisfactions precipitated and perpetuate the collecting and display, for they perhaps presume irrationality. But in fact there are many motivational factors that are shared with commonplace behavior of others.

Initially, the acquiring was a casual, off-hand activity of no particular import, little more than an impulse purchase of items of curiosity value because of my professional involvement in marketing. This became something of a hobby/research project because local sources permitted the acquisition of rare items and knowledge about patent medicine selling, a cornerstone to the history of marketing and advertising. The effort to learn about this topic taught me just how poorly advertising materials were retained by anyone, and how valuable they were as documents for social and economic history. This was evidently even more acute for advertising on radio and television, for no one was preserving these ephemeral electronic events. So a need and opportunity was recognized, and with it came a sense of responsibility. I was in a unique position to do scholarly work on advertising's history and its social import, being better trained in managerial and behavioral fields than conventional historians. Thus I began to be more serious about collecting some things, while continuing to acquire other items just for my own amusement.

The process of searching and shopping has its own rewards. Since many items are rarely seen, and are typically amassed with diverse assortments of other objects, there can

be delight in discovery, finding the treasure amidst the trash. This is a pleasure when it is the reward for search effort, or when it's just a serendipity when least expected. The item may be a bargain for being underpriced, compared to one's own assessment of its rarity and interest value, but it need not be a "steal" to be satisfying. Finding unusual types of items, or items that complement existing holdings is also rewarding. The purchasing process is typically a social one, with bargaining and banter common between buyers and sellers. While this marketplace socializing is common around the world, it has become rare in America, making it all the more to be valued.

There is rarely the satisfaction of closure that stamp or coin collectors typically seek and experience. There is not a finite universe of items such that one might complete full sets, nor is there a well established sense of rarity and value. Some pac-rats do try to approximate this and assemble and publish catalogs listing the universe of items they know to exist. I have seen these for advertising postcards, beer trays and cans, country store displays and dispensers, Coca-Cola ephemera, etc. These are valuable primarily to dealers to get a sense of prices. This can be specious, however, for at least one of these catalogs published greatly inflated price estimates in order to increase the apparent value of the inventory held by the author and offered for sale through the catalog.

The owning and having can be satisfying in several ways. Some collectors take great delight in polishing, packaging, organizing and assembling their inventories, literally fondling their finds. I personally find this a chore done out of necessity and responsibility, and cannot seem to find the time to organize the collection in a way that it deserves, despite my retrieval needs as a curator of the History of Advertising Archives. The fact of ownership does provide a strong sense of identity to one's self and to others. Even the oddity has the virtue of provoking conversation and interest, among professional colleagues and personal friends. For some part of my life, between marriages, it proved a means of meeting and capturing the interest of friends and lovers. Now it serves as a means of establishing in a concrete way my interests and expertise, and permitting publicity for the History of Advertising Archives in visual as well as verbal ways.

The sharing of the collection, such as in this paper and presentation, provides many rewards. It aids my teaching by giving me props to provoke student attention and thought. Visitors can be shown displays, each of which may be worth more than a thousand words. Artifacts and advertiques prove valuable to set designers, museum curators and art directors. All of this sharing is in keeping with the intention of the primary donor to the archives, the Acme Delivery Company, a transport of delight.

Assessment

Just how bizarre is this collecting compulsion, this materialistic monomania? The identified motives range from curiosity, delight in discovery, satisfactions of closure, pride of ownership, creation of identity, social interactions, generosity and sharings, publicity and a sense of responsibility. In and of themselves these are certainly not unique.

Nor, I assert, is the monomania. Many people live lives dominated by a central interest or motif. Some personalities are totally identified with a recreational activity or sports team. Some are totally committed to a job, career or firm. Some lives revolve around drugs, like alcohol. Some are centered around pet ownership, maintenance, grooming, etc. More abstractly, some lives display consistency in repeated displays of fear of failure, insecure assertions of masculinity, compulsive cuteness or clowning, etc. Of all occupations, I would

guess that academics have the highest frequency and degree of monomania. We all know colleagues whose minds are on their fields of interest for virtually every waking hour, and often these are among the most successful as academics.

What may make the behavior unique is its obvious manifestation in material forms. But we know materialism to be a very strong trait in American culture. It is not unusual for people to own or display knick-knacks, souvenir items, memorabilia, or treasured possessions. Nor is it unusual for people to buy well beyond their obvious needs, as evidenced by the enormous inventories of goods sold every year to people with crowded closets, attics, basements, garages, storage sheds, bookshelves, desk drawers, cupboards, etc.

Although I cannot be the final arbiter, it seems that what makes my behavior most unique is the valuing of objects that others take for granted or treat with disdain for being advertising. I'd like to think that uniqueness is also the result of creative inventiveness. There is always something new being bought or created, or the use of old props in new ways. My willingness to make my life dense with advertising is not as intolerable to others as it would seem. Many varieties of personalities find themselves comfortable with me and in my environments; even those like my wife who are averse to advertising in both principle and practice.

Plans

I continue to purchase items, although less frequently and with more exacting criteria. The collection of books and research files of ads already serves as a resource for other scholars interested in historical dimensions of advertising. Bona fide scholars access these and the data bases derived therefrom at cost and with the help of the archives staff. This library is destined for donation to a library, archives or museum. The collection of artifacts and advertiques has a more uncertain future. It is used occasionally as a source of props or creative stimulus for art directors. Many displays are possible, so material is lent to museums. Currently, material is on loan to the new Portland Museum of Advertising and to the Canadian Medical Association for displays. A more permanent display is possible either self-standing, or at the University, or at home. My home is already so rife with artifacts on the walls that conversion to a museum would be relatively straight forward.

Those interested in seeing the existing displays, accessing the data or the library, or borrowing items are encouraged to enquire in Vancouver, BC. The History of Advertising Archives is fully cooperative with all reasonable requests, and can do so thanks to a grant from the Acme Delivery Company.

The Acme Delivery Company: "a transport of delight"

This highly diversified but integrated company is unusual as it has no lawyers or accountants, pays no taxes, and indeed has no cash income. Its most active department is marketing and advertising. Business cards, stationary, rubber stamps, decals, stickers for packages and signage all work to make concrete among affiliates, an international community of colleagues and neighbors, the concept of "Acme Deliveries."

"Acme Deliveries" include chance encounters, serendipity, synchronicity, courtesies, insights, generosity and lucidness in the midst of confusion. Originally created as a fictional firm for sponsoring events in an art gallery show, the acknowledgement of all the volunteered assistance and emotional support was a "thank you for the Acme Delivery." From that time, this community of friends, family, artists and colleagues had a new phrase in their vocabulary, and I created the advertising materials to keep the concept reinforced, believing it beneficial to society to promote as many events and ideas as possible that are either graced, blessed or inspired.

The result is the advertising of the abstract. What seems banal is in fact subtle. It is also like a sheep in wolves clothing. What appears to be predation is typically play. At its best it is the sacred masked as the secular. It is this admixture that makes it so unusual, for it blends what normally stands in antithesis - the "new goods" message of advertising and a "good news" philosophy of Christian charity and compassion. This dialectic reflects my personal ambivalence, being both an admirer and a critic of advertising. I admire the art and creativity, but wonder about the adverse consequences of heavily commercialized culture.

Since my reflections on the cultural character of advertising, "The Distorted Mirror," seem to some to be a curse on the profession and its academics, let me correct any misunderstanding and leave you with my blessing: "May you experience many Acme Deliveries and may these be well appreciated by you and those with whom you share." When you are next in Vancouver, I look forward to providing you with a small Acme Delivery - a guided tour of the collections of the History of Advertising Archives and my personal hospitality.

Richard W. Pollay, University of British Columbia

The wide avenue ending in the large park, the tall proper trees, and the stately old homes down both sides of the avenue all display the venerable history of this New England city. Once prosperous and optimistic, this industrial city has fallen on hard times and almost all of large 19th century homes are finding new uses such as professional offices, art galleries or rest homes for the elderly.

One home, however, is now functioning as a dance studio with a steady stream of children coming and going throughout the school year. In and of itself this might not be problematic, but the old home sits across the street from the most prestigious art gallery in the region, and from early October until January it is decorated with Christmas decorations covering every square inch of available space, inside and out. This attracts a steady stream of cars and pedestrians rubbernecking at the enormous display that many find garish and excessive. Even when the other homes have their holiday decorations up, there remains a striking contrast between the character of the street and this one house.

Literature Review

Despite the obvious magnitude and importance of Christmas activities in American culture, surprisingly little is written about Christmas customs and behaviors in the consumer behavior literature. While there has been some work on gift giving (Belk 1979), the richness and importance of the holiday customs of Christmas in America is not well reflected in the academic literature of consumer research.

Some examples of the kinds of studies that might be done by those with marketing and consumer behavior interests include studies on children's requests and parental yielding (Braddard 1985), the patterns of gifting within the kinship structures (Caplow 1982), the secularization of religious holidays by commercialization (Hall 1984), the beliefs and behaviors held by children about Santa Claus (Belk 1986, Richardson 1982). Other topics, for which role models are not so readily available, include how shopping and decision making patterns change for the Christmas purchasing period, how people cope with the stresses of the holidays, expectations and the meaning of gifts between different dyads of people, such as employer-employee, in-laws, step parents and children, etc. Since gifting behaviors include hospitality as well as tangible items wrapped in holiday packaging, the phenomena to be studied are most rich and this no doubt only begins the listing of potential research topics.

The holiday season is popularly well known for its excessiveness. At no other time of the year is so much effort and money spent in the purchasing process, with gifts bought for many people and with children and loved one often receiving multiple offerings. Stores are at their busiest, with many products enjoying a vast bulk of their annual sales during this season. December sales account for 40% of annual sales of toys for urban department stores, 28% of candy, 25% of cosmetics, 20% of tobacco and liquor, and 25% or more of annual sales of drugs, toiletries, stationery, greeting cards, books and art. Advertising activity for many products also peaks for the Christmas season. Watches, cameras, and health and beauty aids are among the categories often spending 50% or more of annual budgets during this selling season (Schudson 1985, p138-9).

People complain, yet persist, in annual intense efforts to buy, to wrap, to mail cards, to cook meals, to plan functions, to decorate, to return items, to write thank you notes, etc. For many people the scope of this activ-

ity is large as there are many people to be gifted and remembered, many functions to host and attend. As the restudy of Middletown by Caplow (1982) showed, the full scale Christmas ritual in North America is one performed primarily by women. They do most of the decorating and gift wrapping, give more gifts in their own name than do the men, purchase and wrap most of the gifts given jointly and, of course, have primary responsibility for the cooking and hospitality activity, except for the bartending function. But except for this, the rituals of Christmas are performed primarily by women with the men and children as audience and recipients.

So for many individual women this is a period of frenetic activity, often carried out with self doubts about the wisdom and necessity of it all (Barnett 1954). Thus it seems a form of compulsive behavior, enacted perhaps because of the expectations of others, the habits of previous years, or the hope that this year it will all prove more satisfying, and yet often without immediate satisfaction, and without an obvious rationalization.

Above this background of activity, the behavior of some individuals still stands out as unusual and remarkable. It seems notable for its excessiveness, even when it differs only in degree not in character from the more typical behavior. This paper explores one such case history in the belief that it may illuminate both compulsive behaviors generally, and the Christmas behaviors of many.

Background

Rita G. is a petite 5 ft. mother of seven, and now a grandmother. She is nearing retirement age, but is self employed as the instructor/administrator of a dancing school. A first generation native born to southern European immigrants, she began her interest in Christmas, she says, when her own children were small. As her children matured, her collection of holiday materials had grown to where it was literally spilling onto the lawn, where her display grew from year to year and increasingly stood out from those of her more typical neighbors. By 1979, after 7 years of outdoor display, she began to open her doors and hold an open house and conduct tours for the curious.

She identifies no role model, nor has she received much support from her family and priest. Both of these are tolerant but not too encouraging, perhaps because the family must put up with the crowds and the priest sees little religious depth to the activity. Although she is not the only one to decorate her home thoroughly, she identifies no imitators she has stimulated. She recognizes her behavior to be unusual, but justifies it as "good work" and innocent, both of which are true. She is totally lucid, gregarious, responsive and occasionally philosophical. Nothing in her demeanor suggests the unusualness of her Christmas behavior.

Size and Scope

What is it that makes her unusual and leads to the curiosity of the neighbors, the townspeople and now even tourists from further afield? Her large home, handsomely situated, is decorated inside and out, from street to rooftop, from front room to back halls, from floor to ceiling, and from pillar to post with every imaginable square inch filled with Xmas decorations, save for the necessary floor space and seating to permit some semblance of normal functioning.

She displays some 5,000 significant pieces such as wreaths, trees, statues, bows, etc. This is in-filled

with tinsel garlands, simulated snow and ribbon. Naturally, there is also an abundance of Xmas tree lights, both on trees and outlining various architectural features. Music boxes play tunes, in some rooms tapes play seasonal music during tours. As many items as possible reflect the holiday decor, including shower curtains, toilet seats, cookie jars, dishes, glassware, napkins, lighting, etc.

The centerpiece is a large 9 ft artificial tree that sits in an octagonal alcove of this Victorian home. This tree has 40 strings of lights alone. The most characteristic items are the many dancing dolls and figurines, some lit and some with music boxes. These are not particularly Xmas traditions, but are dressed in Xmas clothes and colors and are, of course, very consistent with her dance school. Her most treasured item, what she calls her trademark piece, is a miniature gold Santa Claus that she wears in a pierced bright red fingernail. To the extent that Xmas decorations can be differentiated, her style preferences lean toward what might be labelled "latinate kitsch." Her inventory is in good condition, most of it bought new and well maintained.

Surprisingly little of the material is religious in character. Only one creche scene portrays the baby Jesus and it is dimly lit and overshadowed on the front lawn. A few angels are in evidence, but for the most part it is a secular display, full of snowmen, Santa Clauses, Santa's elves, tinsel, toys and dolls.

This great volume of decorative and functional material cannot, of course, be set up in a few hours on Christmas eve, as is the custom in some families. For Rita the effort begins in early October, two and one half months before Dec 25. Then she, and largely she alone, begins the work of retrieving items from the attic and basement where some of it, like the large tree, has been stored intact, complete with decorations. But aside from this, she claims no system of storage or packaging, nor any fixed system for the displays themselves. Every year she creates a new pattern of display from the available resources.

She gets some help from her husband, a patient custodian on the staff of a major hospital, especially with the major pieces, outdoor efforts and the tear down which starts January 1, not after the traditional twelfth day of Christmas. He tends to stay out of the way while she holds four days of open house during Christmas week, primarily in the evenings. The family who are still close to home still gather on Christmas day. During the long period of putting up decorations, Rita continues to hold her dancing classes for relatively young children.

Public Reaction

As we might imagine, the children of the neighborhood and in her classes all find this wonderful, quite literally, and are less prone than the adults to be taken aback at the unusualness of it all. The close neighbors haven't been surveyed, but one might suppose that the major art gallery across the street takes disapproving note of the clash of cultures evident in the contrast between her display and the sedate formal dignity they strive to maintain.

The general public has been taking note for some time, with the local newspaper and lately the electronic media giving her house some publicity. When interviewed she reports that almost all of her visitors react like little kids, to her delight. Their eyes brighten up at the environment which she says contains "nothing but joy in here." Some laugh, cry or display sentimental emotions, but most are more simply awe struck, dazzled by the density and totality of the fantasy land she creates.

The curiosity level is very high, with cars cruising up and down the street, people walking on her lawns, up her walk, knocking on her door, taking pictures, etc. Schools and daycare groups visit annually during the day.

The scene seems to invoke a certain respect, perhaps of the near sacred, for she was pleasantly surprised after her first year of open house to find that absolutely nothing was touched or missing. Despite the traffic flow, she experiences almost no vandalism.

She is less satisfied these days with the respect and interest paid by the reporters and media. She had received a growing amount of attention over the years. First the local newspaper did an annual story, some years supplemented with a feature piece in a regional magazine or the large metropolitan newspaper from nearby Hartford, the state capitol. By 1984 she was appearing as an item on TV news and that year was on a national network. But in 1985, media interest slackened, frustrating her. Even the local media seem less interested as, to those reporters who have covered the item once before, the story was no longer new news.

Purchasing

She has obviously spent a great deal of money over the years on this collection. She buys every year and during summer holidays in Florida as well as during the obvious season in New England. She will occasionally buy used items, but generally buys new. Some of her figures have cost here as much as \$200 apiece. In 1985 alone, she spent \$500 on garlands of tinsel. In order to save money, she does some purchasing on Boxing Day (Dec. 26) from stores who mark down holiday items to half price then. Some of these suppliers know her interests and set aside the best of their items for her. In 1985, she spent another \$600 on Boxing day for fresh inventory. She keeps no record (that she would share) on the total she might spend in a given year, for certainly there are additional expenditures involved from time to time. Her electric bill, for example, triples during the month of December, rising to about \$300 in that month. Thus for 1985, she had a marginal cash expenditure of at least \$1300.

Motivations

In addition to this substantial annual expense, there is obviously an incredible effort involved in setting up and taking down the enormous display. There is also a prolonged period of interruptions suffered by the whole family as phone calls, car traffic, pedestrians and photographers disrupt their days and evenings. Given these considerable costs, one must wonder what motivates the persistence of the behavior from year to year and the continued expansion of its magnitude.

The cynical suggest that it's all done simply for the publicity, suggesting both the feeding of personal vanity and the instrumental promotion of the dance studio. Certainly this seems plausible at first, for the primary audience of the activity is children of about the same age as are taught dancing. They are generally too young to see the publicity, however, and the parents in the neighborhood are of an affluent class who might well find this behavior strange and not attractive. So while it certainly creates awareness, it's quite indirect and inefficient as a promotional activity.

Rita is also a relatively shy person and does not enjoy the media attention. She greatly resents those reporters who miss her charitable goals or downplay this point and write, instead, stories which focus on her or the unusualness of the house. She does her own publicity work, doing interviews and occasionally inviting media attention, but recognizes the awkwardness of this, for its apparent self-serving nature. She would like to have a patron or volunteer to stimulate the publicity. But if shy and not promoting the business, why does she seek publicity?

Charity! (It's this thought that counts most with her.) She asks all of her visitors to deposit packaged food products to be distributed to the needy. In 1981 she collected some 5,000 items, and in 1982 four nights of open house with 1,000 visitors a night yielded a total of 8,000 items. In 1984, the 10,000 visits in total pro-

duced 15,000 items. 1985 had less publicity, fewer visits, but still yielded more than 10,000 items I estimate. These are given away during the following year to personally selected needy cases, such as a widow in town with several children. A little is recycled through the auspices of established charitable agencies, like the Salvation Army, but the bulk of the charity is local and personal, a relatively rare behavior these days.

She also takes great delight in the reactions of the children of all ages, enjoying their wide eyed awe. She enjoys being part of making Christmas a magic period for people and is proud of her role modelling the charitable giving. Her love of children and her desire to help them understand the value of giving to the needy is illustrated in an incident I witnessed. A couple of somewhat rough street urchins were attempting to collect "admission donations" from visitors outside the house by passing themselves off as family. Rather than resenting their despoiling her scene, she sought them out in order to talk with them so that they would understand and give dominance to the needs of others. I felt that she held a genuine affection for these intruders and acted with compassion for them, not in a chastising manner.

This charity and compassion, especially during Christmas season, suggests the possible important role of religious beliefs. While raised a Catholic, and still a nominal believer, she gets little reinforcement and support for her activities from her parish priest, from whom she seemed somewhat alienated. Her charity is not directed through the church, nor does she directly justify her behavior with Biblical or dogmatic principles. Her displays are secular in nature, with minimal religious symbolism, consistent with Belk's (1986) observation of the mutually exclusive nature of the sacred domains of Christ and Santa, the gods of compassion and consumption respectively. She makes personal reference to the "little boy upstairs" as her focus of attention. This is a most unusual way of imaging Christ, but consistent with her affection for children generally.

This sort of holiday decoration behavior is sometimes motivated by a competition with neighbors. While many neighborhoods do engage in a friendly rivalry as to whose house can be made the most attractive, there is little of this competition near her, nor do any of her comments make any reference to comparisons with others, except to acknowledge the reality that her own behavior is exceptional. Rather than competing with others in the community, she sees herself as in service to them. The service is not just because of the display done at her initiative, but in her expanding the scope of the activity in response to public interest. The first open houses were an accommodation to streams of the curious seeking entry. One year she wanted to stop, but the requests of school teachers planning outings changed her mind. So she is somewhat caught up in a cycle of expectations, from which she gets satisfaction from having a unique social identity and in accomplishing charitable goals.

Creativity is evident in the uniqueness of her designs. Rather than repeating the previous year's successes, she forces herself into a creative mode by creating a new display pattern for each year. She also displays the American trait of wanting each year's effort to be better, new, improved, larger or in some way more successful. Meeting this challenge successfully is part of what makes each year an accomplishment and not just a boring, repetitive effort.

In sum, it would seem from meeting her that her motivations are not the vanity, social competitiveness or publicity seeking that might be assumed. Rather her motivations are a complex of love of children, social identity, fulfillment of community expectations, desire to do good charitable work, pride of creativity and accomplishment of challenging goals.

Plans and Prospects

Her future plans are uncertain as getting through each year is so demanding that next year is too remote to contemplate. Her youngest child will soon leave the household. She and her husband must find the effort considerable and more strenuous as they age. The media are apparently losing some interest. Neighbors and the parish priest have never been too supportive and might well welcome a diminishment of the activity. But, on the other hand, she has a large accumulated inventory of artifacts of no value except for this purpose, and she has created a public expectation. As she says "If I did anything less, people would think I was crazy (Messina 1982)." She hopes to carry on as long as "the little boy upstairs" continues to give her the good health she now enjoys.

Discussion and Conclusion

While we have identified several motivational factors intrinsic to this behavior, we have yet to explain the excessive nature of the behavior. Much of what has been noted could apply to many people with less extreme patterns of behavior. What additional insights explain the development of the behavior and might illuminate other kinds of compulsive or excessive behaviors, or other forms of collecting and display?

Christmas decorating is a widespread activity in our culture. It, and all Christmas related behaviors, are well reinforced by social approval and commercial encouragements. Reinforcement is also obtained from the satisfaction of one's own children, as their delights provide the rewards of generosity. In Rita's case, a large family with many children spread over many years means repeated reinforcement. As the activity grew, the media reaction was also reinforcing, as was the pleasure and pride involved in annually recreating a new magnificence. Initially all of this activity and effort was instrumental towards creating pleasure for others, as well as for one's self.

Why isn't the behavior self-limiting, reaching a natural scale which is readily manageable and more consistent with the scale of activity displayed by others? One suggestion lies in the model of behavior drawn from learning theory wherein instrumental behaviors become terminal behaviors, where means become ends unto themselves. In this case, the display behavior generates reinforcing rewards, both internal and external, and over time the individual learns to enjoy the behavior for its own sake. What was once solely instrumental toward some other end becomes valuable in its own right. With enough internally derived rewards, external reinforcement becomes unnecessary to perpetuate the behavior. Truly compulsive behaviors can be seen as those which persist without external or internal rewards, persisting it would seem as a mindless habit, as if in enduring faith that rewards will be ultimately be forthcoming despite no current evidence to support this.

This notion suggests that Rita's behavior, while excessive, is not truly compulsive for it is still reasonably well rewarded from many quarters. While extreme, it is different only in degree from similar behaviors commonplace in the culture. Its extremity invites certain rewards not part of the commonplace experience. Its unusualness is redeemed and ennobled by its conversion of curiosity to charitable ends. While apparently bizarre, it is ultimately beneficent. It's this thought that counts.

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AN AUDIOVISUAL INVENTORY OF SOME FANATIC CONSUMER BEHAVIOR:
THE 25-CENT TOUR OF A JAZZ COLLECTOR'S HOME

Morris B. Holbrook, Columbia University¹

'Mid pleasures and palaces,
though we may roam,
Be it ever so humble,
there's no place like home.
A charm from the sky
seems to hallow us there,
Which, seek through the world,
is ne'er met with elsewhere.
Home, sweet home!
There's no place like home!

-- John Howard Payne (1823),
Clari: Or, the Maid of Milan

Abstract

This paper pursues an extreme form of introspective participant observation to describe one type of consumer fanaticism. After offering a definition of fanatic consumption in terms of deep involvement, the author explains his use of photographs and musical recordings to communicate the story of his own experience as a jazz fan. He then leads the reader on a 25-cent tour of his musically lived world and concludes that the element of fanaticism found therein makes his house a home.

Introduction

Preview

As my contribution to the special ACR session on fanatic consumption, I shall provide an autobiographical and necessarily personal account of fanaticism in my own consumer behavior as a collector, appreciator, and sometime performer of jazz. Here, I shall focus especially on the tangible symptoms and emblems of my jazz fanaticism as they manifest themselves in the environment with which I surround myself. In other words, I shall dwell on the objects that fill my jazz-related material world and shall try to show how they illustrate the general phenomenon of fanatic consumer behavior. In pursuing this theme, I hope to provide a rich case study or thick description of some use to others rather than merely to conduct a vapid exercise in egocentrism. Yet I am aware that, inevitably, some might interpret my comments from the latter perspective. I shall therefore begin by apologizing to these potential critics in advance.

Methodological Apologies

One stalwart member of ACR's 1986 Program Committee commented that our session on fanaticism in general and my contribution on jazz collecting in particular only push back the frontiers of self-indulgence and therefore deserve to be discouraged. I sympathize with someone steeped in the positivistic tradition who believes that we can best advance our knowledge of consumer behavior by fiddling around with the hypothetico-deductive method for a few more decades until perhaps we finally get it right and Truth majestically reveals herself to us. Indeed, I share many of these positivistic yearnings and still believe in the empirical testing of theory against data. However, I also believe that the development of theory and the creation of concepts can fruitfully draw on a variety of intuitive, introspective, and idiosyncratic insights and that, when we move in the context of discovery, we

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should welcome ideas that come from such self-revelatory sources (Deshpande 1983). Further, even the most hardened advocates of logical empiricism in the social sciences increasingly acknowledge the impossibility of removing subjectivity and value judgments from our scientific procedures (Lincoln and Guba 1985). This postpositivistic recognition that observers inevitably intrude into everything they observe encourages impatience with anyone who pretends otherwise:

When scientists edit themselves out of their own internal representations of their work, or out of those fashioned for communication with colleagues and laypersons, they become the perpetrators of both self-deception and the deception of others (Sebeok and Umiker-Sebeok 1981, p. 134).

Hence, consumer researchers turn increasingly to approaches that involve participant observation and introspection (Hirschman and Holbrook 1986). As indicated by Hirschman's (1985) traversal of research styles (Mitroff and Kilmann 1978), acceptable postpositivistic procedures include everything from telling stories (Tucker 1967) to phenomenological accounts (Fennell 1985) to thick descriptions (Hirschman 1986) to personal anecdotes (Holbrook 1986).

I ask the reader to regard the present paper as an extreme form of introspective participant observation. It describes a consumer subculture -- namely, the world of jazz fans -- from the viewpoint of an informed, integrated, and deeply involved member. It provides a self-report by someone who has in fact pursued a life-long dedication to the fanatic consumption of jazz and thereby supplies an insider's view of the phenomenon investigated by this special topic session. The advantages of self-revelation as a mode of research include both its expediency and its ethics. With respect to expediency, one avoids the need to obtain respondents' signatures on permission forms or to conduct laborious member checks and research audits. With respect to ethics, one skirts the danger of exploiting others or invading their privacy. A countervailing disadvantage concerns the threat that subjectivism might run away with us. Here, I suggest that, as researchers, we must learn more to trust ourselves in this respect. We must learn to accept our own subjective, personal, introspective reactions as one (though only one) source of data and to interpret what these responses mean about the nature of consumption. As consumers, we enjoy a head start in understanding consumption experiences -- if only we don't waste this resource by fearing our capacities to interpret our own phenomenological worlds. In this sense, as I shall try to make clear, hermeneutics begins at home.

Fanatic Consumer Behavior

Let us begin (at home) by interpreting the meaning of the term "fanatic" as it applies to consumer behavior. My copy of Webster's Collegiate Dictionary defines "fanatic" as "marked by excessive enthusiasm and often intense uncritical devotion." This is precisely the sense I wish to convey in describing the phenomena that characterize collectors, cognoscenti, and other committed jazz fans. Such aficionados display "enthusiasm" and "intense devotion" by pursuing the jazz consumption experience for its own sake, as an end in itself rather than as a means to some other personal or social goal. However, the term "fanatic" also carries the pejorative implication that this rampant enthusiasm or devotion leans toward the "excessive" or "uncritical." We do not call jazz fanatics "connoisseurs." Rather, we accuse them of pursuing their consumption activities with a level of passion grossly out of proportion to that experienced by other more temperate

consumers of the same product category.

To cite a personal example, when I play a Chet Baker record such as his performance of Don Sebesky's "You Can't Go Home Again," you hear a rather feeble and clumsy trumpeter with a somewhat cracked and shaky tone stumbling through an unstylishly old-fashioned and syrupy piece that could please you most by ceasing immediately. But what do I hear? I hear intensely delicate and tremulously sensitive lyricism. I hear an expression of anguished pain and longing. I hear a nobility of spirit forcing itself into tortured honesty and emerging from the horn in an ecstatic stream of self-transcending Beauty and Truth. In other words, to paraphrase Chevy Chase, I'm a Chet Baker fan and you're not.

Deep Involvement

The mind set of the fanatic consumer appears to reflect an advanced stage of the phenomenon described by Bloch (1982) as "enduring importance" (Bloch and Richins 1983) or "enduring involvement" (Bloch and Bruce 1984):

At very high levels, enduring involvement may be termed product enthusiasm and is characteristic of product enthusiasts such as car buffs, wine connoisseurs, or avid video gamers. Product enthusiasm entails a strong, abiding, hobby-like interest in the product class in question which transcends the temporary purchase process arousal investigated in most involvement research (Bloch and Bruce 1984, p. 197).

By the time it reaches the level of true fanaticism, this enduring interest attains proportions that I shall characterize as deep involvement. The hallmark of such deep involvement is that it focuses on the consumption experience as an end in itself:

The emphasis is on the product itself and the inherent satisfaction its usage provides, rather than on some outside goal such as purchase optimality (Bloch and Richins 1983, p. 72).

As Bloch and his coauthors point out, this intrinsically motivated quality is the very essence of leisure or play activities (Csikszentmihalyi 1975; Deci 1975; Holbrook et al. 1984; Unger and Kernan 1983). Moreover, deeply involved consumption may play a crucial role in shaping one's own sense of identity.

Identity

In a recent popular piece, Nemy (1986) characterized deeply involved fanatic consumption as a displaced form of security blanket, carried from childhood into adulthood by virtue of its symbolic transformation into a socially acceptable guise. For example, she describes the security-evoking musical consumption habits of George-Paul Rosell as follows:

Music is where it's at for Mr. Rosell. It's the only thing he needs around him when he's alone, when he's depressed, when he's not depressed.... The very fact that the records and cassettes are there to play are, in fact, such comfort that sometimes he doesn't even have to listen to them -- the security can be transmitted by osmosis.... "I can hear the music in my mind," he said. "But I have to know the records are there" (p. 73).

Sociologists explain such phenomena via the process whereby objects and their display to self and others help to develop a self-image that lies at the core of one's personal identity (Csikszentmihalyi and Rochberg-Halton 1981):

men and women make order in their selves (i.e., "retrieve their identity") by first creating and then interacting with the material world. The nature of that transaction will determine, to a great extent, the kind of person that emerges. Thus the things

that surround us are inseparable from who we are (p. 16).... objects have a determining effect on the development of the self, which is why understanding the type of relationship that exists between people and things is so crucial (p. 53).... the impact of inanimate objects in this self-awareness process is...important.... Things...tell us who we are, not in words, but by embodying our intentions (p. 91).

By far the most common locus for building and experiencing one's self-defining material world is the family household: "Thus household objects constitute an ecology of signs that reflects as well as shapes the pattern of the owner's self" (p. 17). It follows that the most direct embodiment of how people see themselves and want to be seen by others appears in their homes:

The importance of the home derives from the fact that it provides a space for action and interaction in which one can develop, maintain, and change one's identity.... The home is a shelter for those persons and objects that define the self; thus it becomes, for most people, an indispensable symbolic environment (p. 144).

Home

In her book called Home-Psych, Kron (1983) follows Douglas (1979) and others in regarding household possessions as part of a language of symbols that communicate:

The furnishing of a home, the style of a house, and its landscape are all part of a system -- a system of symbols. And every item in the system has meaning.... People understand this instinctively and they desire things...because things are necessary to communicate with (pp. 19-20).

Sometimes, such symbolic objects only serve to convey impressions of social status. Often, however, the objects with which we surround ourselves reveal deeper aspects of our personalities. They play a role in personalizing our home environments in a manner that expresses things about ourselves:

Personalizing is...putting your personal stamp on a space and its contents...custom tailoring your space to your image, monogramming it with your crest, imprinting it with your geist, spirit, personality, and life style (pp. 44-45).

Such expressions of personality and character occur with special vividness when we form collections of cherished or otherwise honored possessions and then proceed to array and arrange these objects in ways that we find satisfying:

The most personalized form of expression in the world of objects is found in patterns of arrangement that are not exclusively intended as statements to others and are not solely dictated by the intrinsic characteristics of the objects themselves. To a larger extent these patterns seem to be statements of a person to himself (Ruesch and Kees 1956, p. 143).

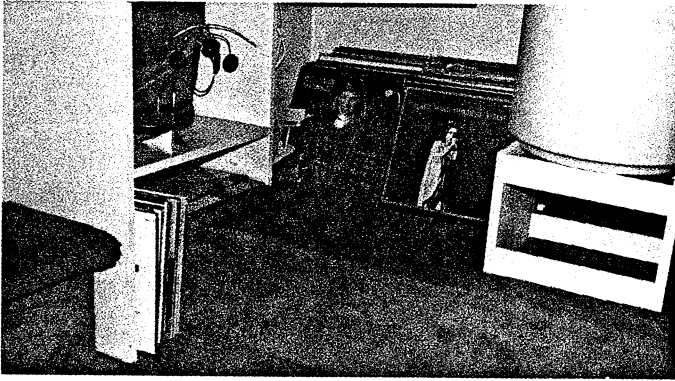
Often, such collecting and arranging behavior attains a compulsive or addictive quality (Kron 1983, p. 200) and results in the kind of room-filling clutter that inspired the exasperated woman in a recent New Yorker cartoon to ask her husband, "Edgar, don't you think it's time you donated a wing somewhere?" (Miller 1986).

Invasion of the Musifacts

This tendency of a collection to grow until it takes over a living space and threatens to crowd out all inhabitants lies at the heart of my own particular consumption fanaticism. Specifically, I acquire and use but never dispose of multitudinous musical artifacts. Much as in the case of Pollay's (1987) "advertiques," these "musifacts" fill my home and slowly encroach on all aspects of family life. They serve as an emblem of my devotion to jazz that others can interpret as a symptom of its fanaticism. Hence, the

FIGURE 1
THE RECORDINGS

A



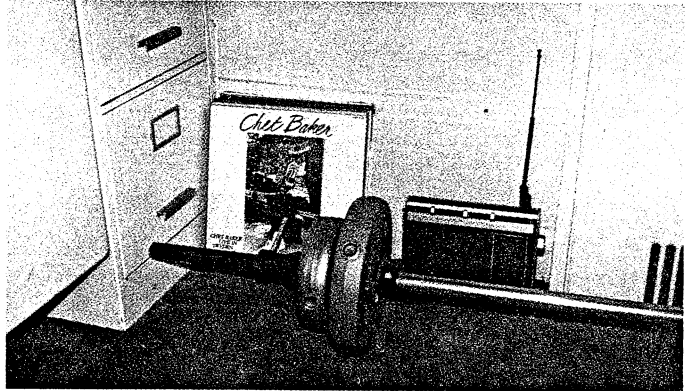
B



C



D



E



F



G



H



array and arrangement of my musifacts reveal much about what matters most to me as a consumer. My musifacts signify my most deeply involved consumption experiences.

Fanatic consumers experience such intense communion with the objects of their consumption that they invariably feel the need -- almost the obligation -- to share that experience with others. This paper manifests that impulse. I want the reader to feel the depth of my commitment to jazz. At the same time, I despair of adequately conveying that deep involvement through words alone. Thus -- in an effort to communicate more vividly -- I turn to photographs and recordings.

Photographs

Last year, Levy (1985) chaired an ACR session on the use of photography in consumer research. The session's participants (Heisley and Levy; Rook; Wallendorf and Westbrook) showed photos and video tapes of consumers engaged in preparing and eating dinner, celebrating Christmas, and contemplating cherished objects. They also discussed techniques for extracting meaningful conclusions from such pictorial records. For example, Heisley and Levy described a procedure known as "autodriving" in which the researcher shows respondents photographs of their own consumption activities and then asks for retrospective interpretations.

In this spirit, my own use of photographs in the present paper might be described as "auto-autodriving." In other words, in what I believe is an unprecedented methodological gesture, I take pictures of my own musifacts and ask myself what they mean to me. Here, I pursue the objectives of both discovery and presentation (Wagner 1979). With respect to discovery, I follow Ruesch and Kees' (1956) use of photography to explore "The Organization of the Material Environment as Personal Experience" on the premise that "the nature and arrangements of possessions say a great deal about their owners' views of existence" (p. 132):

In the course of time, man accumulates a variety of things that threaten to clutter the home.... The more objects accumulate, the more difficult is the maintenance of order, which in turn causes one person to leave a trail marked with debris and another to cover every trace. People have their preferred ways of storing: through piling, shelving, spreading, dumping, aligning, or through exposing or hiding (p. 135).

With respect to presentation, I adopt the use of photography as a vehicle for self-revelation -- that is, for showing others various autobiographical details of one's personal life so as to communicate some subjective aspects of one's own consumption experiences. In essence, this is what we do when we show our guests pictures of our wedding, snapshots of our camping trip, or slides of our vacation in Europe. We use photos to compile an inventory of our consumption experiences and then share that inventory with others as a way of communicating something about our lives as consumers that we think matters. Photography thus reveals the nature of one's inner sanctum -- the otherwise private contents of one's home and the paraphernalia that one uses in pursuit of one's most cherished consumption experiences.

Recordings

However, as a visual medium, photography necessarily abstracts from the sounds, smells, tastes, and touches that comprise a real consumption experience. We can enrich the use of photographs further if we combine them with the sounds they represent. Hence, I shall embellish my presentation with musical examples intended to convey the nature of the relevant consumption experiences. Obviously, I cannot incorporate these into a written paper. I shall, therefore, follow a suggestion offered by Russ Belk and shall make the recordings available to interested listeners by means of a telephone number. Specifically, dur-

ing the middle week in the month of August 1987, the reader may hear the musical examples used in this paper by calling 212-873-7324. If you do so, please leave a message after the beep so that I can keep track of my callers.

The 25-Cent Tour

Recordings

The sine qua non of fanaticism in jazz consumption is listening. Some jazz fans own expensive audio equipment. Some read voluminously. Some play instruments. But all listen avidly to the sounds of music characterized by swinging improvisation.

When I read hi-fi magazines and look at the "installation of the month" columns featuring massively expensive and expensive stereo systems, I often marvel at how little space the millionaires who pay for all this fancy gear seem to devote to the storage of recordings. For example, an impressive sound system recently featured in Stereo Review cost \$15,460, but allowed storage space barely sufficient to hold about 9 record albums, 18 cassettes, and 25 compact discs (Burton 1986). Another awesome array of audio equipment cost \$14,221 but appeared to include no collection of recordings at all (Smolen 1986). This habit of displaying hardware in the apparent absence of software makes the systems maximally photogenic, but forces the conclusion that the more people spend on audio equipment, the more they tend to listen to the radio (assuming that they listen to anything).

The situation differs radically for the true lover of jazz. For the true jazz fan, records and tapes fill every nook and cranny of the home. In my own case, the clutter starts near our main audio system and spills out onto the living room floor, in giant piles that threaten to encroach on our communal space and that therefore demand constant reallocation to other parts of the apartment (Figure 1, Panel A). This conveniently located and rapidly growing mound of records on the living-room floor contains my most recently purchased vocal albums -- the ones that Sally and Chris can stand to hear without too much pain or suffering and, consequently, the only ones permitted to intrude into our common territory. Notice that, in describing these vocal albums, I say "recently purchased" and not "recently recorded" or "recently released." Often and perhaps typically, the recordings themselves represent old or deceased singers in performances from some bygone era thirty or forty years ago -- such as Nat Cole's masterful 1951 rendition of "Walkin' My Baby Back Home."

When complaints from Sally reach sufficiently hysterical proportions, many of these vocal albums find their way into a cabinet on the other side of the living room (Panel B). Here, I keep recently auditioned records that we plan to tape for listening on trips in the family car. Lately, our tastes in this direction have been running toward gospel music, as in Al Green's recording of Joe South's "Don't It Make You Wanna Go Home." Also, for purposes of late-night romantic listening on the couch, this is where I keep my prized collection of albums by Frank Sinatra and Julie London. Performances like Julie's version of "(Back Home Again In) Indiana" provide the jazz fan's answer to the Johnny Mathis style of music for necking.

Notice, however, that thus far I have mentioned only vocal recordings. The real music -- the mainstream instrumental jazz -- has been banished by popular demand to my study, where recent acquisitions live amidst telephones, working papers, and computer output in a painfully cramped and cluttered bookcase (Panel C). On the upper right, I keep new instrumental records that I have not yet had a chance to hear such as Red Rodney's album in the spirit of Charlie Parker with its title song called "Yard's Pad." After I have assimilated such newly acquired offerings, I place them on the lower right to await further disposition. On the left, I keep unwashed (top) and washed (bottom) second-hand albums that also await

auditioning. Sometimes, as in the case of "Go Back Home" by Don Ellis, these sound pretty scratchy, but I love them anyway, especially since many of them are out of print and cost more used than most records cost new. Meanwhile, recordings associated with various projects that I am working on tend to accumulate in different corners of the room. For example, the stack sitting between my barbell and filing cabinet contains the albums from which I have drawn the examples relevant to this particular paper (Panel D).

Thus far, we have seen only little pockets of new acquisitions waiting to be shelved and special-purpose projects waiting to be reshelved. The main collection fills most of another room (Panel E). Here, I have managed to alphabetize all the jazz recordings by the principal artist's last name. Overall, these shelves contain roughly 3,500 albums -- about 2,800 jazz, 400 classical, and 300 miscellaneous (including rock). Content analysis of the shelves confirms that I admire some musicians extravagantly (as indicated by the number of their records that I own): Chet Baker (91), Bill Evans (61), Dizzy Gillespie (72), Hampton Hawes (35), Milt Jackson (93), Charlie Parker (49), and Art Pepper (86), to name a few. For example, I believe that I've managed to collect almost everything that Art Pepper ever recorded (Panel F). No one will ever duplicate his urgently passionate sound. That sound conveys the intense pain that drove Pepper to a tragic life filled with drug addiction and other forms of criminality. On one grim occasion, after not touching his horn for weeks or months, he glued it back together, stumbled into a Los Angeles recording studio to play with Miles Davis' rhythm section, and produced an immortal version of Cole Porter's "You'd Be So Nice to Come Home To."

Some may wonder what happens when the shelves of the main collection start to fill up. My first ploy was to discard books and let records consume almost the whole space, but I have exhausted that strategy because my only remaining books deal with music and are therefore indispensable. A second maneuver involves moving rock albums into Christopher's room. But Chris finally caught on that I was using his room as a garbage dump, announced that he would keep only the Dylan recordings, and made me relocate the rest of the rock-and-roll to a high shelf in my bedroom clothes closet, where innumerable old favorites like Simon and Garfunkel's "Homeward Bound" have become inaccessible and hard to find (Panel G).

As Kron (1983) points out, such problems frequently force people to acquire "a second home in the country to house the overflow" (p. 178). In our case, the house in question is in Lord's Valley, Pennsylvania. Here, I keep spillover that won't fit anywhere else (such as the Time-Life series on the history of jazz) plus all duplicate copies of my most cherished jazz records (Panel H). From this set of second copies, one can easily infer my most important preferences such as my aforementioned fondness for Chet Baker and his recordings of classics like "Love Nest."

Other Musifacts

Audio Equipment. Unlike many music lovers, I regard audio equipment as a necessary evil. I just want to hear the music. I do not worry too much about fancy gadgets or automated features. Because most of the jazz I care about is too old or too obscure to find its way onto compact discs, I have little use for digital audio or other state-of-the-art devices. By contrast, what I do need is music in every location where I might spend any appreciable amount of time (say, five minutes).

This includes the living room (Figure 2, Panel A), my study (Panel B), Christopher's room (Panel C), Sally's office (Panel D), Sally's desk (Panel E), the Oldsmobile (Panel F), and the house in Pennsylvania (Panel G). For other locations and for traveling, I also keep a backup collection of portable radios and tape players (Panel H).

Books and Periodicals. I have read books about jazz since

I was a small boy and cannot bear to throw any of them away. As previously mentioned, they accumulate on my groaning shelves. Luckily, I have been more conscientious about reading and then discarding the sizeable number of jazz periodicals and music magazines that enter my home as welcome guests and sit on one corner of my desk for a period of weeks or even months until I can get to them.

Musical Instruments. Some jazz fans take the ultimate step and actually try to perform the music. This represents the supreme commitment to the fanatic consumption of jazz and demands an investment of passionate energy to which I only wish I could devote more time. My own skills as a jazz musician, while never highly developed, have grown increasingly rusty. Sometimes, after months of shameful neglect, I fear that I shall forget how to play altogether. But my collection of musical instruments serves as a constant, sometimes painful, reminder that I should be practicing. Most conspicuous among these, my beloved Steinway occupies most of what would otherwise be our dining room (Figure 3, Panel A). When the neighbors complain about its Herculean powers to project immense inundations of sound, I have some smaller keyboards to which I can turn (Panel B). Other musical instruments have long ago fallen into disuse and now serve only as decorative objects. For example, an ancient flute fills the space above a doorway (Panel C). Two antique guitars make a nicely matched pair of wall hangings (Panel D). My old trumpet and my grandfather's mandolin serve to enhance a room divider (Panel E). And a fine Deagan vibraharp doubles as a free-standing piece of sculpture (Panel F). Even when I don't have time to play these instruments (or never knew how in the first place), they surround me with a sense of keeping in touch with the heart of my jazz fanaticism. As symbols, these musifacts serve as constant companions and reminders of my devotion to jazz.

Fanatic Consumption and the Home

I conclude with an analogy: Ordinary consumer behavior is to fanatic consumption as a house is to a home. In the maudlin poem by Edgar Guest (1916) "it takes a heap o' livin' in a house t' make it home." Similarly, fanatic consumption takes us through a massive amount of lived experience that, in time, comes to form the boundaries wherein we reside, where we are centered, where we find our home -- our place of comfort, rest, and sustenance. Our houses contain furniture, food, clothing, and other material objects. But, if we are lucky, they also contain the central core of our consumption experience -- the deeply involved appreciative responses, the passionately committed activities, the emotionally charged reactions that inform our truest, most profound consumer behavior and that provide a niche in time and space where we can reside.

So I end on a serious note. I may have been giving you the 25-cent Tour; but, in my heart, this space that I've been describing is a 25-karat place to abide. My precious family lives there. My cherished jazz inhabits it. All my musifacts -- distributed far and wide on shelves or on the floor, in closets or in various other nooks and crannies -- dwell therein. Besides the people in my life, because I am a fanatic, certain objects come alive for me. They fill our house. They make our house my home.

Apparently, then, some forms of fanatic consumption are more than just aberrant behavior. They are a way of personalizing our spaces, of tangibly symbolizing the meanings in our lives, and of humanizing, dignifying, and even consecrating the houses or apartments where we live. Central to every experience of home is the implicit prayer-like wish that one's life in that place will somehow be blessed. Jazz musicians -- who are so often on the road, so often separated from loved ones, so often lonely -- must have a particularly strong sense of that yearning for a permanent feeling of home. This longing often shows in their work. Thus, all the tunes referred to in my paper have carried this theme: "You Can't Go Home Again," "Walkin' My Baby Back Home," "Don't It Make You Wanna Go

Home," "(Back Home Again In) Indiana," "Yard's Pad," "Go Back Home," "You'd Be So Nice To Come Home To," "Homeward Bound," and "Love Nest." I shall conclude by recalling the beautiful record made by the late pianist Bill Evans under the title "Children's Play Song," whose melody paraphrases the tune about home that we all used to sing when we were young:

Bless this house, O Lord we pray,
Make it safe by night and day;
Bless these walls, so firm and stout,
Keeping want and trouble out;
Bless the roof and chimneys tall,
Let thy peace lie over all;
Bless this door, that it may prove
Ever open to joy and love.

-- Helen Taylor and May H. Brahe (1932),
"Bless This House"

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Due to length considerations, Figures 2 and 3 were omitted. These figures may be obtained by writing to the author:

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HOW DO COGNITIVE PROCESSES DIFFER BY LEVEL OF JAZZ FANATICISM?

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Abstract

Listening to jazz seems to demand high-level listening abilities. But audiological findings and new observational data and interview data suggest that differences between neophyte listeners and jazz fanatics lie primarily in listening style, not innate ability, and that styles are diverse, with only a weak relationship existing between increasing fanaticism and the tendency to follow every note.

Introduction

The impetus for the research reported here was a set of findings from several studies concerned with how listeners perceive jazz. For many years I had been asking non-musicians to differentiate jazz saxophone sounds by applying adjectives to different dimensions of their tone perceptions (Gridley 1983). Because this proved to be difficult for many listeners, I assumed that they had deficient auditory abilities. I then began to think that such deficits might be common to the population at large. I further reasoned that to enjoy jazz a listener had to make such distinctions routinely. Conversely, listeners who were unable to make such distinctions probably would not enjoy jazz. These ideas tied nicely to findings from another set of studies in which I had charted sales of jazz records, noting the relative popularity of each style and the musical characteristics that distinguished them (Gridley 1984). I found that the simplest styles had the greatest popularity, and that, for at least 30 years, jazz has occupied about a 3% share of the record market (and recent studies of the jazz radio market have shown a similar figure). This was consistent with a position held by a number of jazz musicians, educators and critics: one reason that most people do not like jazz is that they do not possess the attentional skills that the jazz listening task requires, so jazz listening is too difficult for them to enjoy. I took this idea a step further and assumed that fanatical jazz listeners were jazz listeners, in part, because they possessed exceptional nonverbal auditory attentional capabilities and that the rarity of such high level skills explained, in part, the low percentage of the population that enjoys jazz. Embedded within that assumption is the belief that most people are capable of experiencing only the overall wash of sound, rather than the details of music, such as the note-to-note construction of an improvised jazz solo or the recurring themes in a symphonic piece. In 1906 a similar sentiment had been expressed by Percy Goetschius:

"There are two essentially different classes of music lovers: the one class takes delight in the mere sound and jingle of the music; not looking for any higher purpose than this, they content themselves with the purely sensuous enjoyment that the sound material afford....The other class, more discriminating in its tastes, looks beneath this iridescent surface...no amount of pleasant sounds could compensate them for the absence of well-ordered parts and their logical justification."

Having read several of my papers on the subject, jazz pianist/consumer psychologist Morris Holbrook suggested that these differences in listeners might represent a continuum of cognitive processes, ranging from those characterizing the neophyte listener to those characterizing the jazz fanatic. Holbrook invited me to rethink my old data and collect new data that was specific to identifying cognitive differences that separate listeners who represent different levels of jazz fanaticism.

Method

My exploration took two paths. First I tried to determine the nonverbal auditory processing abilities that characterized the general population, especially in those listeners who did not prefer jazz. And second, I asked jazz listeners how they attended to the music, specifically whether they experienced automatically just the overall wash of sound and contours of the music or they focused automatically on the note-by-note details of the improvisations. To pursue Holbrook's idea that a continuum exists with respect to levels of fanaticism, I asked the listeners to tell me how many jazz albums they owned, how frequently they attended concerts, listened to jazz on the radio, organized their social life around opportunities to hear jazz, etc.

Appraising Auditory Abilities

The single most valuable pool of data was gathered by George Duerksen on 1,914 listeners, 230 of whom said jazz was their favorite style (1967, 68 & 71). Though it did not provide information on lifestyle or how many albums were owned by each participant, Duerksen's study provided valuable data because it was a listening skills task requiring the detection of recurring themes in altered forms.

I expected that jazz fans would perform well with a task such as Duerksen's because I assumed they perform a similar one every time they listen to jazz, if getting the most out of jazz involves following pitches in a melodic line and comparing themes embedded within improvisations. But Duerksen's jazz fans did not perform substantially better than fans of any other kinds of music, the degree to which they preferred jazz over other kinds of music showed no relationship to their success on Duerksen's task. Another surprising finding was that listening experience and musical training made only a modest difference in the task performances, no matter what style the subject preferred.

I also obtained the distribution for the normative sample of Marilyn Pinheiro's Pitch Patterns Test (Musiek & Pinheiro 1986), a task that requires subjects to notice changes in groups of tones, a task that parallels what I believed music listeners do when following the line in a jazz improvisation. Performances on the PPPT were almost homogeneous, demonstrating a highly leptokurtic distribution. In other words, according to Duerksen's and Pinheiro's data, it was apparent that the skills that I assumed to be necessary for listening to jazz improvisation were possessed by most of the population, not exclusively the tiny proportion who liked jazz. This distribution was similar to that which is ordinarily found in audiological screenings. Therefore, we are reminded that most people have fairly equivalent auditory processing capacity.

Because these findings so thoroughly contradicted my own beliefs as well as common wisdom among music educators, initially I was inclined to dismiss them as anomalous. However, Dowling and Harwood (1986) have published a set of literature reviews also showing that musicians and other kinds of trained listeners are not necessarily hearing any more than ordinary listeners, listening experience and musical training are associated with only modest gains in ability to detect intervals, recurring themes, etc. And a number of other investigators came to the same conclusions after having tested different subjects with different procedures. Brand and Burnsed (1981) contended that "there was no relationship between selected music abilities and skill in music error detection." Jesse Evans (1965) found that understanding of musical

elements had only a slight relationship with affective response. Similarly, Warren Prince's data (1968) led him to say that "there is no evidence to support the contention that increased liking for a particular style of music will result when a program of directed listening is employed." In other words, the amount of listening experience and/or listening ability did not make much difference in how well listeners followed the details of music or liked the music, and I could no longer assume that it was primarily listening ability that accounted for the tiny size of the jazz audience.

Consistent with the above findings, I remembered that, in jazz appreciation courses I had taught, neophyte jazz listeners could detect almost every note in an improvised line, as they demonstrated by graphing brief excerpts. One listener had told me that as soon as the suggestion had been planted, she found herself able to detect intervals and recurring themes. Apparently, the idea itself was sufficient to cause the listener to exercise a focus that she had always been capable of anyway. This is consistent with Holbrook and Berteges's findings in which naive and expert listeners showed high and almost identical degrees of perceptual veridicality when the stimuli were recorded performances of classical piano pieces (1981).

Appraising Fanaticism and Listening Style

To determine the relationship between jazz fanaticism and how people listened, I began seeking listeners to tell me what they ordinarily heard when they listened to a jazz improvisation ("every note in the improvised line?" "just the contour of the line?" "the overall wash of sound?"). Seventy-eight subjects were recruited from these sources:

1. jazz fans among my circle of friends and fellow jazz musicians.
2. jazz listeners who attended my performances during weekends where I play at two supper clubs, one in Westlake and the other in Sandusky, Ohio.
3. members of the International Association of Jazz Record Collectors.
4. jazz subscribers at WQLN, a National Public Radio station in Erie, Pennsylvania.
5. members of The Northeast Ohio Jazz Society.

Many subjects belonged to more than one of these five categories.

Results

Several listeners said, first, that they were new to jazz, and, second, that what they heard was just the overall sound, nothing in particular. Some said that changes in loudness or instrument occasionally grabbed their attention, but that they did not necessarily hear anything in particular unless "it jumped out at them." At any given table in the night club where I was playing, frequently one patron would have come for the jazz, whereas the other patrons would have come primarily to accompany the jazz seeker. So I queried not only the jazz seeker, but also the seeker's companion(s), once I determined that the companion(s) was an ordinary listener. And, as I had expected, the experienced listeners sometimes reported that they followed the solo line note-for-note, whereas the companions usually reported hearing only the overall wash of sound.

Further clarification was obtained from in-depth interviews with two long-time jazz fans who were nonmusicians. Both told me how they had begun listening to jazz because they liked the way it made them feel, but then, as the years passed, they pushed themselves to get more out of it. One learned about the song forms that underly improvisation, and he began attending to the way solo improvisations could reflect the underlying chord progressions that were borrowed from pop tunes he knew. The other began recognizing characteristic phrases that were favorites for particular improvisers and found

satisfaction in being capable of identifying them during radio broadcasts before the disc jockey identified the musicians in a recording. And he did this by recognizing their "musical signatures."

Students attending my performances were frequently able to detect song forms upon which my improvisations were structured if they were attending jazz classes with the particular professor who gave lecture/demonstrations on song forms (12-bar blues, 32-bar A-A-B-A, etc.). And they also were able to improve in their detection skills in the few hours they spent with my band, if I prepared them for each piece and then cued them as section markers occurred during the improvisations. This reminded me of my success in teaching students, during a single, lengthy class period, to detect song forms. Incidentally, for those students whose instructors had never devoted class time to "how to listen," the task of following a jazz improvisation was so difficult that they were lost and SEEMINGLY UNABLE to follow an improvised line or the form of chord progression in its accompaniment. This reminded me of how some of my own students had reacted with bewilderment when I first requested that they "graph" a brief excerpt of a recorded jazz improvisation, but that, within a few assignments and a couple notes of criticism on their homework, almost all my students were acknowledging almost every note in selected excerpts. I had assumed that everyone automatically and reflexively "saw" solos as they heard them, and that they could commit their visions to paper to prove to me that they were listening to their assignments. In conversations with listeners, I found that such an automatic perceptual experience was not necessarily common to all listeners; it was almost a synesthetic phenomenon. However, if asked to do it, most listeners could graph the contours of an improvised line, much as Lawrence Marks (1975) has shown that those of us who are not synesthetic can still appreciate synesthetic metaphors and similes in poetry and literature.

When I selected subjects who said initially they focus only on contours or on overall sound, and I asked them whether they tend to listen note-for-note after their initial exposure to a given performance or after the first few moments within, some said they did. And some said essentially that they automatically moved from a molar to a molecular approach over time. Others indicated that they could make such a switch if they wished, but that they did not routinely focus on the note-by-note aspects of improvisations. (Verification for this was available in my earlier experiences with hundreds of non-musician students.)

Interviewees reported a number of different listening styles, not just two, and not necessarily styles that could be construed as subcategories of the two that Goethius assumed to be operating. Some listened to the solo line, whereas others listened to the accompaniment. Some listened to details of the accompaniment, whereas others listened to the overall coherence of the accompaniment. Some followed only the contours of the line, whereas others listened for the melodic content in the line and the phrasing of ideas in the line. Some listened to the interaction between accompaniment and solo line.

I had been assuming that with more experience there would be a greater likelihood of following every note, and several of the fanatics indicated that such a listening style did characterize them. But one aficionado said he tended to hear whole phrases first and individual notes later, if necessary. One jazz musician said that the first time he hears a piece, he experiences the overall wash of sound, then, only if he likes it enough to want to write it down and play it, will he hear it note-for-note on a subsequent listening. Another jazz musician said first he hears the pulse, next he hears the contour of the melody, and only later does he hear the individual notes. And another musician said he goes back and forth between hearing the overall wash of sound and hearing the details, though, if given several auditions, he usually hears the details first and the overall wash on later listenings.

As I interviewed more listeners who had jazz record collections ranging from 1200 to 15,000 albums and who organized their social lives, sometimes their work lives, around opportunities to hear jazz, I found more styles of listening. Some said their automatic response to jazz improvisations was to focus on rhythm. Some said first they recognize the tones of the instruments. This mirrored the reports of the less fanatical listeners, those people who had only 50 to 150 albums and did not organize their social lives around the opportunities to hear jazz.

I asked respondents whether they played or had any experience playing musical instruments. A few who said, "Yes, I've played the bass," also said that bass was the first aspect of the jazz band sound they focused on. Drummers focused on drums. Hornmen focused on the horns. This trend was by no means universal, but it was common for the type of musical experience to be associated with the type of listening style.

Musicians, more than any other group, focused on such aspects as phrasing and note choice. But because so many musicians did not mention such aspects--they identified other aspects first--I am reluctant to say that a note-for-note listening style characterizes musician-listeners more than it characterizes nonmusician listeners. Enough musicians said "the beat," or "overall sound," or "swing feeling" that, without a substantially larger sample, generalization would not be prudent.

When I selected subjects who said initially that they focus only on contours or on overall sound, and I asked them whether they tend to listen note-for-note after their initial exposure to a given performance, some said they did. And some said essentially that they automatically move from a molar to a molecular approach over time. Others indicated that they could make such a switch if they wished, but that they did not routinely focus on the note-by-note aspects of improvisations. (Verification for this was available in my earlier experiences with hundreds of nonmusician students.)

Listening styles did not line up clearly with such listener characteristics as size of record collection or extent of radio listening or concertgoing, or whether they played music professionally. (Distinctions are difficult to make here, however, because the vast majority of avid collectors have at least a few years of instruction on at least one musical instrument, and many are amateur players or semi-pro musicians.) However, those with the largest collections were somewhat more likely to report listening for the underlying chord progressions. Several devoted fans, nonmusicians as well as musicians, reported their first mode of listening to be a search for the identity of the tune originally associated with the chord progressions being used in the improvisation (jazz musicians frequently borrow pop tune accompaniments and use them for accompanying improvisations). No neophyte fans reported such a listening style. And several of the most avid collectors reported focusing first on a determination of how original were the musical ideas in the improvised line. No neophyte listeners reported such a listening style. Some devoted fans reported listening first to the chord progressions, not to the solo line. No neophytes reported such an approach. Many avid listeners reported first following just the contours of improvised lines than later following note-by-note, or first focusing on the overall group cohesiveness, then later attending to the construction of the solo line. Though many neophytes also reported listening just to the overall sound, most did not mention routinely moving to a more detailed evaluation later. When queried, most neophytes did indicate, however, that they were capable of following note-for-note, and they demonstrated this to me when I asked them to recite details. In other words, consistent with the above cited ability studies, the neophytes were capable of listening in a note-by-note fashion, but they were not prone to use that style of listening.

I had assumed that to get the most out of jazz, the listener, had to follow every note in the solo line, identify recurring themes and little melodies embedded in the improvisations, and that fanatical listeners employed that method whenever they were exposed to a jazz performance. I also assumed that jazz listeners were better able to sustain concentration on such a task because they represented an elite group of innately superior listeners. However, a number of experienced jazz listeners reported that rhythm or "the beat" or "the pulse" was the most salient attribute of the jazz listening experience. This challenged my assumptions. I found that many jazz fans, even aficionados, were drawn first to rhythmic aspects such as the insistent pulse of the sound or the swing feeling. They were not necessarily drawn first to the note-by-note construction of the improvised lines. In fact, one interviewee, who owns thousands of records, runs his own jazz radio program, and teaches jazz history, said that his greatest joy comes from hearing the rhythmic tensions that are generated between parts in the jazz combo.

Jazz fans, even the most fanatical, do not comprise a homogeneous group with respect to their cognitive processes, nor do their levels of processing lie along a single continuum. In other words, a new model must be drafted to describe the jazz listening task. And it has to include variations that account for those fans who said they listen first to "just the overall sound," for those who said "the beat" and for those who said "I listen for little melodies inside the jazz improvisations." And it has to account for those listeners who apply a variety of approaches within each audition, those who flit back and forth between approaches or divide their attention among elements.

So, despite my earlier views, it now seems that the reason many people experience only the overall wash of sound in a musical performance is not that they are incapable of following the details, but rather that they are not motivated to seek the details. They are the first of the two classes of music lover that Goetschius described. And cognitive style seems to explain why some people automatically hear details first and the whole later, other listeners hear the whole first and the details later, whereas an additional category of listeners (perhaps the largest category) flits back and forth "from seeing the forest to seeing the trees," so to speak.

I did not measure the listening abilities of my subjects. So there remains the possibility that fanatical jazz listeners do possess superior listening skills. However, because Duerksen and others tested such large samples, including jazz fans, and found that the vast majority of listeners have similar capabilities, it is unlikely that jazz fanatics have superior capability. Most devoted fans, however, are aware of a greater number of listening styles. And, of course, the more experienced listeners have made more choices about what to listen for, and they have a backlog of material with which to compare each new performance. If we characterize this as listening skill, then the fanatics do possess more than the neophytes possess. However, in many phases of the study and the accumulation of the material that led up to it, inexperienced listeners demonstrated that, with minimal instruction, they could follow just about as much of the musical detail as many of the most serious fanatics routinely followed.

Listening styles were found to not be highly organized according to increasing size of record collection along a continuum of tendency toward listening for note-by-note construction of jazz improvisation. The tendency is there. But the diversity of listening styles obscures it, and the number of extreme fanatics who do not listen in that way is substantial. Furthermore, almost all interviewees, regardless of level of fanaticism, reported capability of following in a note-by-note fashion. An interaction between cognitive style and motivation

explains the largest portion of the variance in approaches that people use in listening to jazz. Listening experience and knowledge of the material seem to play the next greatest role.

Both of Goetschius's classes of music lovers exist among jazz fans, whether they be neophytes or fanatics. Furthermore, every variation and combination of those types can be found in abundance. Among jazz listeners of widely differing sophistication there are widely differing approaches to listening. But choice of listening style does not necessarily reflect listening ability or level of fanaticism. Though I personally believe that, to get the most out of listening to jazz, one needs to follow every note of the solo improvisation, I will no longer claim that those listeners who experience primarily the wash of sound are any less fanatical or any less capable listeners than are those who listen note-for-note.

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ASSESSING UNACCEPTABLE ATTRIBUTE LEVELS IN CONJOINT ANALYSIS

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Abstract

Some adaptive conjoint analysis methods reduce the attribute space by allowing the respondent to state which attribute levels are completely unacceptable. Utilities are not estimated for these levels, and it is assumed in later choice simulations that respondents would never choose alternatives that possess these levels. This procedure allows a more efficient estimation of conjoint utilities, but its value depends on whether the judgments of acceptability are consistent with respondents' behavior in later choices. In the study reported here, 15 percent of all choices contained an attribute level previously designated unacceptable, indicating some inconsistency between the judgments and choices. However, the overall accuracy of choice predictions was unaffected by the initial elimination of alternatives with unacceptable levels. The practical implications of these findings, and the relationship of judgments of acceptability to decision strategies are discussed.

Introduction

Adaptive estimation techniques have greatly facilitated the use of conjoint analysis. These interactive programs customize data collection for each individual, based on an ongoing analysis of responses throughout the interview. One method that some adaptive techniques (such as Johnson's Adaptive Conjoint Analysis (ACA) program) use to reduce data collection is to ask the respondent to state which of the attribute levels in the study are completely unacceptable. Utilities are not estimated for these unacceptable levels, because it is assumed that a respondent would never choose an alternative that had one.

The advantages of this process are clear. Eliminating unacceptable levels reduces the set of parameters to be estimated for a respondent, allowing more efficient estimation of the utilities of remaining levels. Shorter interviews should lessen respondent fatigue and produce better data. The real question is: what effect does this procedure have on the predictive accuracy of conjoint analysis? The answer depends on two factors. The first is the decision maker's ability to identify unacceptable attribute levels, as opposed to those that are merely undesirable. The second is the extent to which conjoint utilities for unacceptable levels adequately model the impact of those levels on an evaluation. These two factors are discussed in turn below.

How well can decision makers distinguish between attribute levels that are truly unacceptable and those that are simply undesirable? One difficulty is that acceptability is likely to be context dependent, rather than an inherent characteristic of an attribute level. For instance, a decision maker might refuse to consider any alternative with level (x_i), when he knows that attractive alternatives without that level are available. However, given a choice set where some attractive features are available only on alternatives containing x_i , a tradeoff might well be made. If context is critical, the decision maker's expectations about the choice context should influence what levels are judged acceptable.

When respondents are asked to judge the acceptability of attribute levels in adaptive conjoint analysis, no particular choice context is provided. In some cases, the range of the other attributes' levels is not yet known. In this situation, respondents' current perceptions of marketplace alternatives should serve as the context for their judgments. The more consistent subsequent choice simulations are with these perceptions, the more appropriate the judgments of acceptability will be. However,

if later simulations contain unanticipated attribute levels, unanticipated distributions of attribute levels, or unanticipated combinations of attribute levels, then eliminating alternatives based on prior judgments of unacceptability may be premature. It seems likely then that respondents' judgments of acceptability may be least consistent with later choices in decisions involving unfamiliar products, or new attributes within a familiar product class, where expectations about context are less certain.

Given that judgments of unacceptability are consistent with later choices, will a noncompensatory model that eliminates alternatives with an unacceptable level necessarily improve predictions of choice? The reason for expecting improvement is that truly unacceptable attribute levels imply a noncompensatory process. Studies of choice processes have demonstrated that noncompensatory choice strategies are common (cf. Acito and Olshavsky 1980; Payne 1976). A choice simulation that eliminates alternatives with unacceptable attribute levels may better represent the actual choice process than the compensatory conjoint model, which allows an unfavorable attribute level to be offset by other, desirable attribute levels.

On the other hand, a closer representation of the actual choice process doesn't guarantee a better prediction of the choice outcome. Research has often shown that the results of one evaluation process may be well predicted by the model of a second, distinct process (Finhorn, Kleinmuntz, and Kleinmuntz 1979; Payne, Braunstein and Carroll 1978; Thorngate 1980), and that the linear, compensatory model is particularly robust (Dawes and Corrigan 1974). The conjoint utilities calculated for unacceptable levels may adequately represent their negative impact on an alternative. The low utilities of unacceptable levels may typically result in no alternative that possesses one being predicted as the respondent's choice. In this case, the predictive accuracy of a choice simulation will not be improved by the immediate deletion of alternatives with unacceptable levels.

The discussion above presents several issues related to the usefulness of eliminating unacceptable levels in conjoint analysis. The study reported here presents some empirical evidence related to the following questions.

- (1) Are respondents' choices consistent with their prior identification of unacceptable levels; that is, do they ever choose alternatives with unacceptable levels?
- (2) Does the predictive accuracy of a simulation model that eliminates alternatives with unacceptable attribute levels improve on the predictions of the standard conjoint model?

Methodology

Design

A study was done in which unacceptable attribute levels were identified, but not excluded from the estimation of utilities and subsequent choices. Respondents were interviewed about either ballpoint pens or credit card size calculators in each of two situations: selecting the product for the respondent's own use (the SELF situation) and as a gift for another person (the GIFT situation). The attributes and levels presented to respondents are shown in Table 1.

TABLE 1
ATTRIBUTES AND ATTRIBUTE LEVELS USED IN THE STUDY

PEN ATTRIBUTES	ATTRIBUTE LEVELS			
PRICE	\$20	\$10	\$5	\$1
BRAND	Cross	Sheaffer	Papermate	
APPEARANCE	Looks like Pen R ^a	Pen S	Pen T	
POINT	Medium point	Fine point		
COMFORT	Comfortable	Uncomfortable		
INK COLOR	Blue ink	Black ink		

CALCULATOR ATTRIBUTES	ATTRIBUTE LEVELS			
PRICE	\$40	\$20	\$8	
BRAND	Casio	Radio Shack	K-Mart	
GUARANTEE	2 year	1 year	No guarantee	
WATCH/ALARM	Watch and Alarm	Watch Only	No Watch	
KEYS	Musical keys	Silent keys	or Alarm	
POWER SOURCE	Solar power	Battery power		

^aActual pens with these labels were shown to respondents.

Respondents

A paid convenience sample of 120 university students was used. Respondents were selected based upon a screening questionnaire which asked about their interest in owning each of a series of products (including pens and calculators) and whether they could specify a person for whom the product would make a suitable gift.

The Choice Set

The alternatives had been designed to have low inter-attribute correlations, within the constraint that they be realistic. Therefore, the best brands of each product were offered only at the two highest prices. The attribute levels that had been judged a priori to be less favorable also had a slightly lower frequency in the choice set than the more favorable levels.

Procedure

Each respondent participated individually in a session whose average time was one and a half hours. In the first part of the session, two pencil and paper questionnaires were administered; the first dealt with the SELF situation, and the second with the GIFT situation. In each questionnaire Johnson's (1974) matrix tradeoff technique was used to assess utilities for the product's sixteen attribute levels. After providing rank order preferences in the 12 matrices presented, respondents were asked to check which of the attribute levels were so disliked that "if a product had it, you would immediately reject it as an alternative". It was pointed out that "You may not feel that (this is true) for any attribute level. If so, just go on to the next question." Above the column in which the unacceptable levels would be checked, it was restated that the levels "would usually cause me to reject (the product), NO MATTER WHAT ELSE IT HAD TO OFFER." The emphasis on and repetition of the instructions was intended to prevent respondents from simply checking the least liked levels, as opposed to truly unacceptable ones. The two questionnaires differed only in terms of the situation under which the judgments were made and the order in which the matrices were presented.

After filling out the questionnaires and taking a short break, the respondent made several choices. Only the two relevant to the issue at hand are described here. First, the respondent was asked to choose the product he would buy for his own use from a set of 18 product descriptions typed on index cards. As the choice was made, a concurrent protocol was collected by asking the respondent to articulate what he was thinking about during the decision task. This was tape recorded with the respondent's permission. The respondent was then asked to rate the difficulty of the choice and his or her confidence in its being the best alternative in the set.

The choice procedure was repeated, this time with the respondent selecting the product as a gift for the person designated earlier as a possible recipient. The alternatives were identical in the two decisions, except for the order in which the attributes were listed on the index cards, and the order in which the cards were stacked when presented to the respondent.

The Choice Models

Two models were used to predict choice. The first is the standard additive, compensatory model typically used in conjoint analysis (COMPENSATORY). The second (ELIMINATION) model eliminates any alternative with an unacceptable level, then uses the COMPENSATORY model to predict which of the remaining alternatives will be chosen. For cases in which all alternatives have an unacceptable level, the COMPENSATORY choice is predicted. This assumes that the best of a bad lot is chosen, as opposed to a no-buy decision.

RESULTS

Utilities

Utilities were estimated using Johnson's (1975) pairwise monotone regression program. A set of utilities consists of one respondent's preferences for the product attributes in one situation. In this study, there were 120 sets of utilities for each product (60 respondents in each of two situations: SELF and GIFT). A Kendall's tau correlation of the predicted and actual matrix rank orders was used to test the utilities' goodness-of-fit; any utility set with a tau less than .70 was discarded from subsequent analyses. Three of the pen utility sets (2.5 percent) and fifteen of the calculator sets (12.5 percent) failed to meet this criterion, leaving a sample of 117 utility sets for pens and 105 utility sets for calculators.

Protocols

Each verbal protocol was transcribed and analyzed for evidence of noncompensatory eliminations, which were defined as the rejection of an alternative on the basis of only one of the attribute levels it possesses. There was agreement between two independent coders in 86.3 percent of the cases where a noncompensatory elimination was identified. For details on the coding procedure and results, see Klein (1986).

Unacceptable Levels

Respondents indicated that an average of 2.3 of the 16 attribute levels were unacceptable across all decisions; this is broken down by product and situation in Table 2. There was no significant difference between products in terms of the number of unacceptable levels identified. However, for calculators significantly fewer unacceptable levels were stated for the GIFT situation than for the SELF situation ($p < .05$). This may indicate less certainty about the recipient's preferences for calculator features. Line 2 of Table 2 shows the effective set size for the ELIMINATION model; that is, the average number of alternatives in the choice set with no unacceptable levels. On the average, removing alternatives with unacceptable attribute levels reduced the set by half. In 4 percent of all decisions, there were no acceptable alternatives at all (line 3).

Do respondents actually follow through with their assessments of unacceptable levels when they make choices? Line 4 of Table 2 shows that 15 percent of all decisions were inconsistent; that is, the chosen alternative possessed an unacceptable level. In 4 percent of the decisions, this was unavoidable, since all alternatives had some objectionable level. However, in 11 percent of the decisions respondents chose an alternative with an unacceptable level even though there were acceptable alternatives in the choice set.

TABLE 2
ANALYSIS OF UNACCEPTABLE LEVELS

	All Decisions	Pen SELF	Pen GIFT	Calculator SELF	Calculator GIFT
	N= 222	59	58	52	53
(1) Average Number of Unacceptable Levels	2.3	2.4	2.2	2.5 ^a	2.1
(2) Average Number of Unacceptable Alternatives ^b	10	11	8	12	10
(3) Proportion of Decisions With No Acceptable Alternative	4%	7%	3%	6%	2%
(4) Proportion of Actual Choices With Unacceptable Level	15%	15%	9%	21%	15%

^aNumber of unacceptable alternative levels for the SELF and GIFT situations is significantly different for calculators (p<.05).

^bUnacceptable alternatives are these with at least one unacceptable level.

If these respondents who chose inconsistently had considered carefully their judgments of acceptability, then their eventual choices must have required a serious reassessment of priorities. One would expect that in this case the decision would be more difficult than for respondents whose choices were consistent with their previous judgments. However, respondents who made inconsistent choices did not rate the decision as more difficult, or have any less confidence that they had made the best choice. It seems likely that respondents whose choices were inconsistent with their earlier judgments had simply overstated the strength of their dislike for the levels they had rated as unacceptable. The ELIMINATION model will fail to predict such choices, which leads to the question of how incorporating judgments of acceptability affects the predictive success of conjoint analysis.

Accuracy of Choice Predictions

How good are the predictions of the ELIMINATION model compared to the COMPENSATORY model usually used in conjoint analysis? The accuracy of the two models' individual choice predictions is shown in Table 3; they predict individual choice equally well.¹ The results of a first choice simulation for the 18 alternatives in each product-situation are shown in Table 4. Neither model has consistently superior predictions, and the two models' errors in predicting aggregate choice tend to be in the same direction. In total, neither model has an edge in predictive accuracy for these choices.

¹ Only about half of the first choices were predicted by either model; but with 18 alternatives there may have been several close contenders for the best alternative. Another test of predictive validity was carried out by measuring how much utility the actual choice had compared to the alternative with the highest utility. This measure is expressed as the ratio:

$$U_d = (U_{comp} - U_{actual}) / (U_{comp} - U_{minimum})$$

where: U_{comp} = the utility of the COMPENSATORY choice
 U_{actual} = the utility of the actual choice
 U_{min} = the lowest utility of any alternative in the set

The difference ratio will be zero if the actual choice is also the COMPENSATORY prediction of the standard conjoint model. The ratio is 1.0 if the worst alternative is chosen. The ratio U_d averaged .07 across all decisions, ranging from .05 to .10 for the four product-situation combinations. Therefore, while the first choice predictions were accurate only half the time, the actual choices were among the highest in utility in the choice set.

TABLE 3
ACCURACY OF INDIVIDUAL CHOICE PREDICTIONS

Product	Choice Situation	N	Proportion of Choices Correctly Predicted	
			Compensatory Model	Elimination Model
Pen	Self	59	48%	51%
Pen	Gift	58	45%	47%
Calculator	Self	52	42%	44%
Calculator	Gift	53	53%	51%
All Decisions		222	47%	48%

TABLE 4
FIRST CHOICE SIMULATION RESULTS

Alternative ^b	Proportions of First Choices ^a						
	SELF			GIFT			
	Actual Choices	COMP Choices	ELIM Choices	Actual Choices	COMP Choices	ELIM Choices	
Pens	1	20	17	15	40	38	40
	3	20	29	25	2	7	7
	4	29	36	42	10	10	10
	5	2	5	2	-	-	-
	6	3	0	0	2	0	0
	7	5	2	2	14	12	12
	8	-	-	-	0	0	2
	9	3	0	0	12	5	10
	11	17	8	10	19	19	15
	12	2	0	0	0	2	0
	13	-	-	-	0	0	2
	15	0	2	2	2	5	2
	18	0	2	2	0	2	0
		100%	100%	100%	100%	100%	100%
Calculator	1	12	4	2	17	13	9
	2	4	6	8	15	13	11
	3	0	2	4	4	8	6
	4	4	4	6	2	4	4
	5	2	0	0	-	-	-
	6	17	33	29	6	15	15
	7	6	10	4	9	6	4
	8	0	2	0	-	-	-
	9	31	25	33	21	17	25
	10	2	0	0	4	2	2
	11	10	2	2	4	2	2
	12	6	0	2	11	11	9
	13	-	-	-	0	2	0
	16	6	6	4	2	0	0
	17	2	8	7	6	8	13
		100%	100%	100%	100%	100%	100%

^aN=59,58 for pen SELF,GIFT choices; N=52,53 for calculator SELF, GIFT choices

^bOnly alternatives that were predicted or chosen are shown.

Both models correctly predict half of the individual choices. Are they making fundamentally the same predictions, or are they predicting correctly for the same number of different individuals? This distinction is important because if the COMPENSATORY and ELIMINATION models predict different individuals' choices well, it would be advantageous to search for ways to identify the more appropriate model a priori. However, if the two models made essentially the same predictions, the choice of a model for conjoint analysis is less critical. As mentioned earlier, the two models will make the same prediction when the conjoint utilities for unacceptable levels are low enough to prevent the alternatives that possess them from having the highest overall utility. The first line of Table 5 shows that the two models predicted the same choice for 82 percent of all decisions. Even though the ELIMINATION model rejects more than half of the alternatives out of hand, in only 18 percent of the decisions does it eliminate the alternative with the highest overall utility. The two models' predictions generally agree, despite the fact that the ELIMINATION model sharply reduces the choice set. Thus the models of two distinct processes produce the same outcomes, as earlier studies have shown. The accuracy of each model's predictions reveals nothing about the underlying decision process.

TABLE 5
ACCURACY OF CONVERGENT AND DIVERGENT PREDICTIONS¹

	All Choices	Pen SELF	Pen GIFT	Calculator SELF	Calculator GIFT
	N= 222	59	58	52	53
Convergent Predictions	N= 183	48	52	39	44
% Correctly Predicted	51% ^a	54%	46%	46%	57%
Divergent Predictions	N= 39	11	6	13	9
% Correctly Predicted by COMPENSATORY	28%	18%	33%	31%	33%
% Correctly Predicted by ELIMINATION	36%	36%	50%	38%	22%

^aRead: 51% of the decisions where the COMPENSATORY and ELIMINATION models predicted the same choice were correctly predicted.

Despite the small sample size (N=39), it's tempting to investigate the decisions for which the two models made different predictions. Is the accuracy of a model's prediction an indicator of the decision processes that were actually used in these choices? The predictive accuracy of both models deteriorates when their predictions diverge, as shown in Table 5. The COMPENSATORY and ELIMINATION models, respectively, predict only 28 percent (N=10) and 36 percent (N=11) of the choices correctly when their predictions differ, compared to 51 percent correct when their predictions converge. What perceptions and processes are associated with the decisions each model predicts correctly? If the model fit reflects the choice strategy used, then when the COMPENSATORY model's prediction is accurate fewer noncompensatory eliminations will be found in the protocols than when the ELIMINATION model's prediction is accurate. Since compensatory processing involves more extensive evaluation of information, it's also expected that the respondent will rate the decision as more difficult when the COMPENSATORY model predicts well. The extensive evaluation is also predicted to result in greater confidence that the best choice was made.

An analysis of the protocols shows an average of 3.1 different attribute levels eliminated noncompensatorily in decisions the COMPENSATORY model predicts accurately, as opposed to 3.4 levels when the ELIMINATION model predicts correctly. The difference between these means is not significant. Although the power of the test is low, it's still clear that the underlying process for both models has a strong noncompensatory component. Even when the models made different predictions, there is little evidence that the accuracy of their predictions indicates much about the processes used in making the choice. It's interesting that the decisions predicted by the COMPENSATORY model were perceived as significantly more difficult, with a mean of 4.6 on an 8-point scale, as opposed to 2.3 for the decisions predicted by the ELIMINATION model ($p=.02$). Respondents whose choices were predicted only by the COMPENSATORY model were also significantly less confident about having chosen the best alternative (5.5 as opposed to 7.0 on an 8-point scale, $p=.04$). More detailed analysis of the protocols may provide some hypotheses about the relationship of these variables to the models' fit.

Discussion

Conclusions and Recommendations

The elimination of unacceptable attribute levels from conjoint analysis is an attractive procedure for the many reasons cited earlier. The fact that in this study eliminating alternatives with an unacceptable level did not affect the accuracy of first choice predictions is encouraging. The utilities calculated for unacceptable levels effectively remove the same alternatives from contention as the ELIMINATION model does. The benefits of simplified data collection should ordinarily be sufficient justification for reducing the attribute space in this way. Two additions to the procedure are recommended. First,

respondents should be given information about all attribute levels in the study before they make any evaluations of acceptability. For example, the rank ordering of attribute levels to provide a starting solution for the analysis might precede the judgments of acceptability. Second, the effects of eliminating unacceptable levels should be analyzed, including how often each attribute level is judged unacceptable, and the number of alternatives eliminated from contention in subsequent choice simulations. Both of these analyses will help to convey the impact of the procedure on the choice simulations.

There are some cases in which the risk of inaccurate identification of unacceptable levels may be greater, and a more conservative approach is desirable. For instance, a new product or an important competitor may possess an attribute level likely to be rated unacceptable, or respondents may be unfamiliar with the combinations of attribute levels available in the marketplace. Before eliminating alternatives from the analysis, more probing should be done to verify that respondents' judgments of acceptability are consistent with their willingness to make tradeoffs in later choices. For instance, the respondent could be asked to make a pairwise choice for each attribute level they had judged unacceptable. The first alternative of the pair would be composed of the unacceptable level and the respondent's most preferred level of every other attribute. The second alternative would consist of the least preferred acceptable level of each attribute. (It is assumed that both alternatives are plausible combinations of attributes.) The choice of the first alternative would indicate that the respondent will actually allow other attribute levels to compensate for the unacceptable level, and the level can be retained in the conjoint analysis. The choice of the second alternative indicates that the unacceptable level is unlikely to ever be chosen, and it can be deleted from subsequent analysis. This verification procedure should increase confidence in the appropriateness of deleting attribute levels from the conjoint analysis. It would be interesting to see if forcing such choices showed that many fewer attribute levels are truly unacceptable than are stated as such. With better screened input, the ELIMINATION model might improve on the COMPENSATORY model's predictive accuracy.

Study Limitations

There are several limitations to these research findings. First, both products are relatively low involvement purchases, although choices of gifts in these product classes are arguably less so. It may be that when the consequences of the purchase are slight, as with a low involvement product, fewer levels are truly unacceptable, and tradeoffs are made more readily. Also, when involvement is higher preferences may be better thought out and the identification of acceptability perhaps more consistent with subsequent choices.

It has been postulated that context has a strong effect on both judgments of acceptability and the consistency of those judgments with later choices. Context was not investigated here, and these findings may not generalize to other choice contexts (e.g. with a greater number of levels per attribute, stronger correlations among attributes, or a less even distribution of an attribute's levels in the choice set). A systematic examination of the effects of both particular choice contexts and the accuracy of the decision maker's expectations about context is desirable. The procedure followed in this study allowed respondents substantial experience with the attribute levels before they judged the acceptability of each one. The quality of the acceptability judgments in this study may be better than for studies where respondents judge without knowing the levels of all other attributes.

The use of verbal protocols during the decision could be a problem if they were intrusive, altering the nature of the decision processes and outcomes. However, Ericsson and Simon's (1980) review of the available evidence on how concurrent protocols change the process being reported concluded that there seemed to be no effect on the process

when two conditions are satisfied. The first is that the information reported is already encoded verbally; the second is that there is no instruction for the respondent to monitor the processes for specific events. Both of these conditions held in the current study.

Finally, only first choice predictions were made in this study. In marketing research, utilities are sometimes rescaled to reflect strength of preference. A respondent's "share of preference" for each alternative is then calculated, based on the amount of overall utility for each alternative. Predictions of share of preference should be more sensitive than first choice predictions to the elimination of unacceptable levels, since first choice predictions are affected only if the alternative with the highest utility has an unacceptable level.

Further Research

The elimination of unacceptable attribute levels from conjoint analysis was evaluated by the consistency of judgments of acceptability with later choices, and by the procedure's impact on predictive accuracy. There's no evidence here that these eliminations worsened prediction. However, up to 21 percent of the choices made in an specific decision (calculator - SELF) did contain an unacceptable level. It's also possible that respondents whose choices were consistent with their judgments might not be so given sufficient incentive: an attractive alternative with an unacceptable level. There should be further testing of this procedure with various products and choice sets.

The verbal protocols may also yield more information about the reliability of the judgments. For instance, the protocols might show whether an unacceptable level was deliberately traded off, regardless of the eventual decision. It would also be possible to assess whether the treatment of an attribute level was consistent throughout the decision, or seemed contingent on the other levels it was paired with in an alternative.

From a practical perspective, it's sufficient to ask whether the predictive accuracy of conjoint analysis is changed by the process of eliminating unacceptable attribute levels. However, there are many intriguing questions about how a decision maker's anticipated choice strategy relates to the actions taken in a choice task. Are the levels identified as unacceptable those actually eliminated in a noncompensatory choice process? An initial examination of the protocols shows that 32 percent of the respondents eliminated alternatives due to attribute levels they had previously judged acceptable, while at the same time retaining alternatives with supposedly unacceptable levels. How strongly do noncompensatory decision strategies reflect judgments made prior to the choice, as opposed to dynamic responses to a particular choice context that is encountered? A better understanding of such decision processes may eventually result in a model combining compensatory and noncompensatory choice processes that improves our ability to predict choices.

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TESTING THE IMPACT OF DIMENSIONAL COMPLEXITY AND AFFECTIVE DIFFERENCES
OF PAIRED CONCEPTS IN ADAPTIVE CONJOINT ANALYSIS

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Abstract

Judgments of preference between paired concept profiles are sometimes used in preference elicitation procedures. We examine two aspects of the design of paired profiles. The first aspect is the dimensional complexity of the task measured by the number of attribute dimensions on which a pair differ. We find that limiting the number of dimensions on which a pair differ increases response speed, improves the attitude toward the task and the richness of response, with no apparent decrease in effectiveness predicting subsequent choices. The second aspect we examine is the affective difference or the degree of indifference in preference between the pairs. We find that minimizing this affective difference takes more respondent time but results in richer responses and better choice prediction. The results have implications for the parameterization of adaptive preference programs and for preference elicitation in general.

Introduction

The development of the microcomputer has opened the way for new and very exciting advances in preference assessment. One such advance is represented in a computer-based conjoint system called ACA written by Sawtooth Software. Among the benefits of this system is that it allows market researchers to estimate very complex preference structures on an individual basis. The system can handle as many as thirty attributes, each at nine levels, although in practical applications ten attributes on four or five levels are probably the maximum that would result in stable estimates. Since a 4⁹ design would be impractical with under 32 judgments using standard fractional designs (Green 1974), the ACA system allows greater design flexibility than conventional methods. It also offers the benefit of handling all of the design details.

ACA performs this sleight-of-hand by combining priors with the conjoint judgments to arrive at an individual's preference function. The priors are estimated through a direct-elicitation procedure wherein levels within each attribute are rank-ordered by the respondent. These values are multiplied by the subjective importance of each attribute measured on a 1-4 scale to create prior estimates of the utilities for all levels of each attribute. The priors are then updated using the conjoint tradeoff questions.

The advantage of using the priors is that it frees the user from the design constraint of needing an identifiable conjoint design matrix--the design matrix within ACA is always identifiable because each attribute level is represented by an identified parameter in the priors matrix. A second advantage stems from the fact that the information in the priors can be used to choose the most efficient conjoint question in successive updating of parameters.

The conjoint task in ACA is a graded-pair comparison task (Pessemier et al 1970, Huber and Holbrook 1982) in which respondents are asked to assess their relative preferences between approximately 16 pairs of profile concept descriptions. Each pair is evaluated on a 9-point scale (1 = greatly prefer upper concept, 5 = indifferent, 9 = greatly prefer lower concept).

The focus of this study is on two variables that alter the efficiency and the psychological impact of conjoint: the dimensional complexity of the pair and the affective difference between the pair.

Dimensional complexity refers to the number of attributes on which a concept pair differ. For example, out of an original attribute set with perhaps 8 attributes, only from 2 to 5 of these may differ in ACA for any displayed concept pair. The number of attributes differing in a given pair is termed "dimensional complexity" because it refers to the number of dimensions one must process to make an appropriate conjoint response.

Affective difference refers to the magnitude of the difference in preference between the concepts in a particular pair. For example, a large affective difference results if all the preferred attribute levels are concentrated in one concept. By contrast, if the desired and undesired levels are balanced across the pair then the affective difference will be small. The ACA system is programmed to present pairs whose affective differences, given the current information on an individual, are small. It does this by permuting the levels of the upper and lower concepts so that the resulting comparisons are as close to indifference as possible. Figure 1 illustrates a paired comparison from our study with high expected difference and a permuted version with a low one.

Both the dimensional complexity of a pair and its expected affective difference alter the statistical efficiency of the conjoint analysis, the respondent's reaction to the task, and its correspondence to future choice. The next section details these expected differences.

FIGURE 1

EXAMPLE OF A CONJOINT PAIR WITH HIGH EXPECTED AFFECTIVE DIFFERENCES AND A PERMUTED VERSION WITH LOW DIFFERENCES

Profile 1

Pair with High Expected Affective Difference

PREFER 1	4 MINUTE DRIVE TO CLASS
TOP 2	FULL KITCHEN AND SPACIOUS LIVING AREA
3	SECOND FLOOR WITH QUIET STREET
4	FREE CABLE TV AND ON-SITE LAUNDRY
5	
6	16 MINUTE DRIVE TO CLASS
7	KITCHENETTE AND SMALL LIVING AREA
PREFER 8	FIRST FLOOR WITH BUSY STREET
BOTTOM 9	NO CABLE TV OR LAUNDRY FACILITIES

Profile 2

Pair with Low Expected Affective Difference

PREFER 1	4 MINUTE DRIVE TO CLASS
TOP 2	KITCHENETTE AND SMALL LIVING AREA
3	SECOND FLOOR WITH QUIET STREET
4	NO CABLE TV OR LAUNDRY FACILITIES
5	
6	16 MINUTE DRIVE TO CLASS
7	FULL KITCHEN AND SPACIOUS LIVING AREA
PREFER 8	FIRST FLOOR WITH BUSY STREET
BOTTOM 9	FREE CABLE AND ON-SITE LAUNDRY

Theoretical Development

A fruitful way to think about conjoint is that it simulates a choice process in the marketplace by forcing tradeoffs among alternatives. Depending on the task,

however, there may be more or less correspondence between any particular conjoint method and the choices one wishes to simulate. Dimensional complexity and affective difference are two important ways to vary the pairwise conjoint task and thereby change its correspondence to subsequent choice.

The Impact of Dimensional Complexity

Dimensional complexity is expected to affect the correspondence of conjoint to choice in a number of ways. First, by increasing the number of attributes differing within a pair one increases the efficiency of the experimental design (see Huber and Sheluga 1980). Intuitively, this increase in efficiency derives from the fact that each judgment on a concept pair provides information only on the attribute levels which differ on the pair. In factorial designs, this effect can be quite strong. For example, a factorial design with four attributes differing requires about half the number of judgments for the same expected precision as a design with two attributes differing. Thus, holding other aspects constant, a pairwise conjoint exercise with higher dimensional complexity is expected to be more precise, and thereby more accurate in predicting choice.

However, other aspects are not equal. In particular, dimensional complexity may also increase the difficulty of the task. If so, then more time can be expected to be spent on the conjoint judgments and there will be greater error about these judgments. Further, the higher dimensionality may cause respondents to simplify the task by omitting variables when making the judgment. This leads to fewer attributes achieving statistical significance. Finally, the greater effort required for the task is also expected to increase the perceived difficulty and tediousness of the task.

With respect to the correspondence of conjoint to choice, predictions are more difficult. Clearly, as dimensional complexity becomes too high, say at 6 or 7 attributes differing, then respondents are likely to distort their conjoint judgment strategy. At some point, the additional statistical precision gleaned from greater complexity is overcome by a distortion in the judgment process. Where the optimal level of dimensional complexity occurs is an empirical question that provides much of the motivation for this study.

The Impact of Affective Differences

Like pair complexity, the affective difference between a concept pair has both statistical and psychological implications. Since statistical efficiency is increased by greater psychological distance, ACA's attempt to minimize these differences comes at the cost of lower efficiency. The reason for this derives from the fact that for balanced pairs, once all but one of the attribute differences is defined, the last difference is predetermined. This induces a mild colinearity among the variables which reduces the statistical precision of the estimated parameters.

The psychological advantages of ACA's small affective differences may well outweigh their lessened power. Since a concept pair is relatively well-balanced in ACA, the judgment is more challenging, cannot be answered easily, but may be perceived as being more interesting. A more important benefit of minimizing affective differences is that it avoids strong swings in the response scale. With a nine-point scale a pair with a large affective difference may either go off the scale or compress subsequent ratings, resulting in a large error. (See DeSarbo, Mahajan and Steckel 1986 for a similar proposition). Thus, by cuing a more homogeneous response, the small affective differences may minimize distortions in the response scale.

Finally, it is expected that the small affective differences in ACA result in greater correspondence to subsequent choice. This follows from the idea that actual choices are often based on comparisons among

comparable alternatives. Strongly dominated alternatives are quickly eliminated and attention is focused on the more affectively similar items in the set. If so, then the conjoint responses of subjects whose affective differences are minimized may correspond better to choice.

Experimental Procedure

One hundred thirty-four MBA students participated in the study. They were randomly divided into six experimental groups according to a full-factorial experimental design having two levels of affective difference and three levels of dimensional complexity. The high level of affective difference was created by generating fixed paired concepts that replaced the adaptive selection of profiles in ACA. The three levels of dimensional complexity were set at two, three, and four attributes differing among concept pairs.

Each respondent was given a diskette, asked to complete the task on a personal computer, and was given two blank diskettes or a set of marker pens as a reward upon its return. They were told that the purpose of the study was to assess their preferences toward apartments that they might choose while attending business school. The apartments differed with respect to five attributes each defined over the four levels shown in Figure 2.

The task took about 20 minutes and involved six sections. The first section asked respondents to indicate their preference order on the levels within the attributes. The second section evaluated the importance of each attribute. In the third section respondents judged 16 paired concepts similar to those shown in Figure 1. A fourth section asked them to rate concepts in terms of purchase likelihood. The fifth section assessed attitudes towards the task using 7-point scales with the following paired adjectives: enjoyable/aggravating, stimulating/tedious, interesting/boring, relaxing/frustrating, easy/hard, simple/complex, relevant/irrelevant, and realistic/unrealistic. In addition to enabling us to gauge attitude toward the task, this section increased the time lag between the conjoint questions and the final choices.

FIGURE 2

ATTRIBUTES AND LEVELS USED IN STUDY
FOR A 2 BEDROOM APARTMENT

<u>Attribute Name</u>	<u>Levels</u>
MONTHLY RENTAL PRICE:	\$175 \$210 \$245 \$280
DRIVING DISTANCE:	4 MINUTES TO CLASS 8 MINUTES TO CLASS 12 MINUTES TO CLASS 16 MINUTES TO CLASS
SIZE:	FULL KITCHEN WITH SPACIOUS LIVING AREA FULL KITCHEN WITH SMALL LIVING AREA KITCHENETTE WITH SPACIOUS LIVING AREA KITCHENETTE WITH SMALL LIVING AREA
SITUATION:	SECOND FLOOR WITH QUIET STREET FIRST FLOOR WITH QUIET STREET SECOND FLOOR WITH BUSY STREET FIRST FLOOR WITH BUSY STREET
AMENITIES:	FREE CABLE TV WITH ON-SITE LAUNDRY FREE CABLE TV WITH NO ON-SITE LAUNDRY NO CABLE TV WITH ON-SITE LAUNDRY NO CABLE TV AND NO ON-SITE LAUNDRY

The "holdout" choices, shown in Figure 3, concluded the task. These were designed to simulate a selection of apartments as might appear in a newspaper ad. Notice that most pairs within each set differ on from two to four dimensions. This simulates that aspect of the choice

task where one has narrowed the choice to alternatives that are relatively similar among themselves. For each choice set, respondents were asked for their first and second choices. There were four choice sets, the first one repeated at the end to get an idea of the reliability of the choice task. Overall 77% of respondents gave the same response to choice set 1 as they did to its exact duplicate, set 4.

By breaking the choices into paired comparisons we are able to produce a relatively fine-grained measure of the accuracy of the conjoint parameter estimates (see Gulliksen and Tucker 1961, Chapman and Staelin 1982). Knowing the first choice in a set provides three paired comparisons since the chosen item is preferred to the three others. Similarly, the second choice is preferred

FIGURE 3

CHOICE SETS USED TO VALIDATE CONJOINT

Choice sets 1 and 4

1. Four minutes from class, quiet street, first floor, free cable, no laundry, full kitchen, spacious living area, \$280 per month.
2. Sixteen minutes from class, quiet street, first floor, free cable, laundry, full kitchen, spacious living area, \$210 per month.
3. Eight minutes from class, busy street, first floor, free cable, laundry, full kitchen, spacious living area, \$175 per month.
4. Four minutes from class, busy street, first floor, free cable, laundry, full kitchen, spacious living area, \$175 per month.

Choice Set 2

1. Sixteen minutes from class, busy street, second floor, free cable, no laundry, kitchenette, small living area, \$175 per month.
2. Four minutes from class, busy street, second floor, no cable, no laundry, kitchenette, small living area, \$245 per month.
3. Eight minutes from class, quiet street, second floor, kitchenette, small living area, no cable, no laundry, \$280 per month.
4. Sixteen minutes from class, quiet street, second floor, free cable, laundry, kitchenette, small living area, \$280 per month.

Choice Set 3

1. Twelve minutes from class, busy street, second street, no cable, laundry, kitchenette, spacious living area, \$210 per month.
2. Sixteen minutes from class, busy street, first floor, no cable, no laundry, full kitchen, small living area, \$245 per month.
3. Four minutes from class, quiet street, first floor, no cable, no laundry, full kitchen, spacious living area, \$175 per month.
4. Sixteen minutes from class, quiet street, first floor, free cable, laundry, kitchenette, spacious living area, \$280 per month.

to the two remaining. Thus, we have five implied paired comparisons per choice set. Our measure of the accuracy of a conjoint model is the proportion of the twenty (4 sets times 5 pair comparisons per choice) implied paired comparisons that are correctly predicted.

In sum, the experimental procedure enables us to evaluate the effect of dimensional complexity and affective differences on a number of dependent variables: internal conjoint efficiency and consistency, the time taken to complete the conjoint, the richness of these responses measured by the number of significant attributes, the attitude of the respondents to the task, and finally with respect to the ability of the conjoint to predict holdout choices.

Results

The preference function for each subject was estimated using least-squares regression of the concept pair judgments augmented by the priors. The design matrix was built by dummy coding of the 16 pair differences and appending to it a 20 x 20 identity matrix for the prior estimates of the 20 (5 attributes x 4 levels) parameters. The dependent variable was a vector of length 36 in which the first 16 elements were the centered pair preferences and the next 20 elements were the prior estimates of the 20 conjoint parameter values. The twenty resultant conjoint parameter estimates were used to predict choices in the holdout stimuli, and from these the accuracy of each experimental condition was assessed.

The six conditions were compared with respect to fit of the regression model, R^2 , and to the size of the squared error around the regression. The degree of richness in response was estimated by the proportion of the 20 parameters that were significant at the $p < .05$ level. Finally, the efficiency of the design of each condition was assessed through the trace of the inverse cross product of the design matrix $(X'X)^{-1}$ (see Judge, Griffiths, Hill and Lee 1985). This statistic is proportional to the variance of the parameter estimates and is primarily a function of the efficiency of the conjoint design.

Across subjects, a full factorial design permits us to estimate interactions between the three levels of dimensional complexity and the two levels of affective differences. Since most of these interactions were not significant, we focus below on the main effects of these two experimental variables.

The Effect of Dimensional Complexity

Table 1 gives the values for the various dependent measures under the three levels of dimensional complexity. First notice that the accuracy of choice did not differ significantly. As expected, however, having fewer dimensions differing resulted in less time to complete the task. While the squared error about the conjoint did not differ across conditions, the variance about the responses to pairs did. In particular, those subjects whose pair comparisons differed only along two dimensions had the greatest variability about those judgments. These two results led to a greater index of fit (R^2) for those with less dimensional complexity (since $R^2 = 1 - (\text{squared error} / \text{variance about judgments})$). The lower complexity also appeared to increase the richness of the responses in that more coefficients were statistically significant, replicating a similar finding in Huber and Sheluga (1980). Finally, lower complexity resulted in a perception of the task as being significantly more enjoyable, stimulating and relaxing.

What does this mean? From a pragmatic viewpoint it argues that paired comparisons should be based on fewer differing dimensions. While such judgments may result in designs with less statistical efficiency, they predict as well or better than judgments based on greater dimensional complexity. Furthermore, the simpler judgments take less time and induce less frustration on the part of respondents. The simpler judgments may also eliminate the need for subjects to devise a simplifying heuristic, such as dropping attributes of lower importance from the judgment process. This may explain the improved performance in richness of responses obtained with lower dimensional complexity. Thus, if this result is replicated in other contexts it suggests that ACA should

be set to have only two, or at most three, dimensions differing for any pair. The task will not only take less time, but respondents will be happier and accuracy will not be impeded.

TABLE 1

EFFECT OF DIMENSIONAL COMPLEXITY
ON THE EFFICIENCY AND EFFECTIVENESS
OF THE CONJOINT ESTIMATES

(Standard Errors in parentheses)

VARIABLE	DIMENSIONAL COMPLEXITY Number of Dimensions Differing		
	2	3	4
Time to Complete Conjoint (minutes)	11.36 (0.47)	12.91** (0.49)	13.05** (0.69)
Squared Error Within Conjoint	1.12 (0.08)	1.07 (0.08)	1.18 (0.09)
Variance due to Efficiency of Conjoint	9.53 (0.05)	9.01** (0.05)	8.82** (0.05)
Variance in Responses to Pairs	8.68 (0.38)	6.20** (0.39)	6.24** (0.44)
Conjoint Fit: R ²	0.91 (0.01)	0.88** (0.01)	0.88** (0.01)
Number of Significant Coefficients	7.73 (0.39)	6.75** (0.44)	6.13** (0.60)
Enjoyable/ Aggravating	3.91 (0.16)	3.28** (0.18)	3.47* (0.18)
Stimulating/ Tedious	3.31 (0.19)	2.27** (0.19)	2.72* (0.19)
Relaxing/ Frustrating	4.38 (0.14)	3.88** (0.14)	3.98* (0.14)
Easy/ Hard	5.08 (0.22)	5.04 (0.20)	4.91 (0.23)
Interesting/ Boring	3.67 (0.21)	3.37 (0.23)	3.54 (0.20)
Simple/ Complex	4.89 (0.22)	5.18 (0.20)	4.91 (0.23)
Irrelevant/ Relevant	2.78 (0.17)	3.13 (0.21)	2.98 (0.20)
Realistic/ Unrealistic	4.87 (0.21)	4.81 (0.21)	4.78 (0.24)
Choice Accuracy: Proportion Correct	0.78 (0.02)	0.79 (0.02)	0.76 (0.02)
	n=45	n=44	n=45

* The difference between this value and those for subjects with 2 dimensions differing is statistically significant at $p < 0.10$ level.

** The difference between this value and those for subjects with 2 dimensions differing is statistically significant at $p < 0.05$ level.

The Effect of Affective Difference

Table 2 gives the means of various dependent variables for the two levels of affective differences. The first column gives the results for the adaptive conjoint which minimized affective differences between pairs. The

second column gives the results for the experimentally induced high affective differences. Notice, as a manipulation check, that the variance in responses to pairs is greater, as one would expect, when affective differences are larger. Notice also that the greater affective differences result in a more efficient design--the variance due to the design is about 5% smaller in the case of the high affective differences.

TABLE 2

EFFECT OF AFFECTIVE DIFFERENCE
ON THE EFFICIENCY AND EFFECTIVENESS
OF THE CONJOINT ESTIMATES

(Standard Errors in parentheses)

VARIABLE	LEVEL OF AFFECTIVE DIFFERENCE	
	Low	High
Time to Complete Conjoint (minutes)	12.95 (0.43)	11.82* (0.47)
Squared Error Within Conjoint	1.09 (0.07)	1.12 (0.07)
Variance due to Efficiency of Conjoint	9.39 (0.05)	8.91** (0.03)
Variance in Responses to Pairs	6.37 (0.36)	7.72* (0.34)
Conjoint fit: R ²	0.89 (0.01)	0.89 (0.01)
Number of Significant Coefficients	8.16 (0.34)	5.58** (0.40)
Enjoyable/ Aggravating	3.46 (0.13)	3.64 (0.16)
Stimulating/ Tedious	2.94 (0.14)	3.00 (0.17)
Easy/ Hard	5.07 (0.17)	4.95 (0.18)
Interesting/ Boring	3.46 (0.15)	3.49 (0.19)
Simple/ Complex	4.71 (0.18)	5.27** (0.16)
Relaxing/ Frustrating	3.95 (0.12)	4.21 (0.11)
Irrelevant/ Relevant	2.95 (0.14)	2.97 (0.17)
Realistic/ Unrealistic	4.65 (0.19)	4.98 (0.17)
Choice Accuracy: Proportion Correct	0.80 (0.02)	0.76* (0.01)
	n=67	n=67

* The difference between the two values is statistically significant at $p < 0.10$ level.

** The difference between the two values is statistically significant at $p < 0.05$ level.

However, this increased efficiency does not appear to lead to better predictions. The high affective differences lead to a 76% accuracy rate while the minimized differences of ACA lead to 80% accuracy, a difference significant at the 0.10 level. Other variables give part of the reason for this difference.

While squared error and R^2 do not differ, the low affective differences in ACA lead to a greater number of significant attributes (8.2 vs 5.6). Further, the task is viewed as less simple, more complex, but, importantly, not significantly more aggravating or tedious. This suggests that by permuting the pairs so that subjects would be as indifferent between them as possible, ACA has directed more attention to the task. Apparently this increase in difficulty acts differently than in the previous case of increasing pair complexity. Thus, having trouble in deciding between alternatives appears to lead to greater richness in response and greater correspondence with subsequent choice, rather than the reverse.

Conclusions

This study has examined the effect of dimensional complexity and affective differences on the efficacy of preference elicitation procedures using judgments on paired concept profiles. The results strictly apply to a limited sample of respondents and to the product class and holdout stimuli used here. Generally, there is a need to replicate these results over different respondent and stimulus domains. An interesting study would be to examine the robustness of the results to the particular holdout choice stimuli used. It is reasonable to expect that more complex holdout choices would be best predicted by conjoint tasks that elicit analogously complex processing.

If replicated, however, the results point to some interesting implications for conjoint analysis. The direct implication for ACA is that the number of dimensions differing should be kept at two or three. A second implication is that the unique adaptive nature of ACA which minimizes that affective differences between stimuli is a valuable aspect of that system. This may imply that other conjoint designs should be balanced as well in the sense of avoiding profiles likely to evoke extreme responses.

On a more theoretical level, this study highlights an important distinction between internal and external reliability in preference assessment. Both successful strategies, minimizing affective differences and decreasing dimensional complexity, have an immediate liability of lessening the statistical power of the conjoint design, and thus are suboptimal from a statistical perspective. However, both strategies have important positive effects on the respondents that appear to result in either an increase in predictive power or greater speed and a more positive attitude on the part of the respondents. This suggests that the search for optimal conjoint designs may need to focus on the psychological impact of the questions in addition to their strict statistical properties.

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SUBJECT/REFERENT POSITIONING IN COMPARATIVE
ADVERTISING: A PILOT STUDY

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Abstract

This paper presents a pilot study that examines the use of comparative advertising in accomplishing certain product positioning objectives. It is hypothesized that using a product with a large number of distinctive features, such as a market leader, as a subject or a referent in comparative ads may systematically affect perceptions of product similarity. The results support the hypothesis and suggest the need for further research.

Introduction

Even a casual observation of current promotional practices reveals an extensive use of explicit comparative advertising. The practice is readily apparent in all media for a number of both products and services. The popularity of comparative advertising is particularly interesting in light of the often conflicting and generally negative empirical evidence regarding its effectiveness (for reviews see Lincoln and Samli 1979, Ash and Wee 1983, and Shimp and Gresham 1983). This discrepancy may be due, at least in part, to the lack of a unified conceptual framework regarding the goals of comparative advertising. Initially, the use of explicit comparisons in advertising was driven by a vague, regulatory posture (Federal Trade Commission circa 1971) rather than theoretical developments. As a result, a very wide range of variables have been used across studies to measure the effectiveness of comparative ads. Most importantly, variables relating to the promotional goals of the advertiser have taken a back seat.

This paper reports the results of a pilot study designed to test a conceptual approach to comparative advertising that emphasizes specific promotional objectives. The approach views comparative advertising as a means to accomplish certain product positioning goals (Wilkie and Farris 1975; Shimp and Dyer 1978; Gorn and Weinberg 1984). With these goals in mind, a related psychological framework based on consumer perceptions of proximity (Tversky 1977) is used in an attempt to construct effective comparative ads. After reviewing previous approaches, we outline our own approach and its implications for ad development. The pilot study and results are then described.

Past and Present Conceptual Approaches

From Cognitive Responses to Positioning

Although a number of empirical studies of comparative advertising have been conducted in the last ten years (see reviews cited above), few offer useful theoretical explanations of existing research results. It is important to remember that conceptual or theoretical developments were not the driving force behind this research. Certain authors' have, however, provided important insights into how comparative ads are processed by consumers.

Belch (1981), for example, applied a cognitive response approach (Wright 1973) to the use of one-sided versus two-sided comparative advertising messages. He argued that two-sided messages should be more effective than one-sided arguments because counter arguments are less readily available. Moreover, the relatively positive effect of two-sided claims should increase with exposure as the positive thoughts generated have more opportunity to sink in or affect attitudes. Murphy and Amundsen (1981) focused on the issue of new brand utilization of comparative claims using a cognitive dissonance approach. They suggested that consumers ignore or down play attitude disrupting, or dissonant, information. Because

a new brand may claim equality or dissonance approach. They suggested that consumers ignore or down play attitude disrupting, or dissonant, information. Because a new brand may claim equality or superiority over more familiar brands, this may be met with resistance or skepticism. Alternatively, however, these authors mention the possibility that new brands may, in fact, encounter fewer negative cognitive responses (using Wright's framework). Because opinions regarding new products have yet to be formed, there is little basis for counterarguing. This idea was suggested originally by Shimp and Dyer (1978). Also in the context of the cognitive response framework, Swinyard (1981) linked active counterarguing to attribution theory. Accordingly, whether or not an advertiser is seen as either truthful or self-serving determines the strength of the counter arguments.

While these studies provide some basis for understanding, the generally negative research results on comparative advertising remain inconsistent with generally positive practitioner attitudes reported elsewhere (Hisrich 1983). This suggests that the approaches described above fall short. Consistent with more recent theoretical approaches (Gorn and Weinberg 1984), we feel it is important to focus on the promotional and related marketing strategy goals that comparative ads may be used to accomplish.

As originally discussed by Wilkie and Farris (1975), the important marketing goals of comparative advertising concern product positioning. Two particular positioning goals may be facilitated through the use of comparative ads: association and differentiation. Direct comparisons may be used to show consumers that particular products are either very similar, very different, or similar in some ways and different in others. Unfortunately, relatively few empirical studies of comparative advertising have emphasized positioning (Shimp and Dyer 1978; Pride, Lamb, and Pletcher 1977; Gorn and Weinberg 1984).

Viewing comparative advertising as a positioning tool focuses attention on a very direct measure of comparative advertising effectiveness. Whether the goal is association or differentiation, effectiveness can be measured by the perceived proximity or similarity of the products involved. Gorn and Weinberg (1984) focused specifically on the psychological distance between brands as a result of comparative advertising and, in fact, obtained positive results. In their study, comparative ads by a challenger brand resulted in an increase in perceived similarity between the challenger and a market leader when contrasted with non-comparative ads. Very simply then, the important question is whether or not a comparative advertisement affects the perceived similarity or dissimilarity of the sponsor's product in the desired direction.

Gorn and Weinberg's results suggest that comparative ads facilitate association. They do not, however, discuss types of comparative ads that may either be particularly effective at increasing association or may, in fact, differentiate products. If perceived similarity is the dependent measure of interest, it is important to understand how consumers judge similarity in order to explore this question.

The Contrast Model

Tversky (1977) provides a psychological model of similarity, called the contrast model, that has important implications for marketers interested in comparative advertising (Johnson 1986). According to

Tversky, we judge similarity by contrasting common and distinctive features. While common features add to similarity, distinctive features detract. (For a detailed discussion see Tversky [1977] or Johnson [1986].) An important aspect of Tversky's model is that the task environment affects the relative influence or weight of common and distinctive features toward a judgment.

A particularly important task factor is whether a product is used as a subject or a referent in comparisons of the form "how similar is a to b?" (where a is the subject and b is the referent). Subject/referent position can systematically influence perceived proximity. Johnson (1981), for example, found consumers' judgments of the similarity of Shasta Cola to Coke to be larger than judgments of the similarity of Coke to Shasta Cola. The contrast model explains such asymmetries in judgment by the weights placed on the different feature sets. Judgments made in a subject/referent format emphasize the features of the subject. When two stimuli differ in the size of their distinctive feature sets, subject/referent asymmetries may result. In the Shasta/Coke example, because Coke has more distinctive features than Shasta, Shasta is judged as more similar to Coke than Coke is to Shasta. Using Coke as a referent rather than a subject in comparison reduces the impact of Coke's distinctive features on perception. Subject/referent asymmetries of this type are more likely the more the products being compared differ in the size (or the salience) of their distinctive feature sets (Johnson 1986).

In light of the contrast model, the positioning goals of comparative advertising can be restated as an attempt to control the weight consumers place on common and distinctive features when judging proximity. Advertisers pursuing an association strategy should emphasize common features. Those pursuing a differentiation strategy should emphasize distinctive features. One very direct way to influence these weights is by taking advantage of subject/referent asymmetries. The use of subjects and referents in comparative advertising is a controllable advertising variable. Consider a new or existing product that has relatively few distinctive features in memory compared to an established product. If the goal is association, the distinctive aspects of the established brand may be deemphasized by using the established brand strictly as a referent rather than a subject in the ad. If one is attempting to differentiate the new product, it may be wise to focus attention on or use the established product as a subject rather than a referent. This will effectively emphasize the established product's distinctive features in order to differentiate the two products.

Two concrete examples will help illustrate the two strategies. In an attempt to reaffirm the differences between Seven-Up and soft-drinks such as Coke and Pepsi, Seven-Up recently used ads that focused initially on Coke and Pepsi before making any reference to Seven-Up (to emphasize that Coke and Pepsi have caffeine while Seven-Up "never had it, never will!"). Alternatively, in an attempt to associate and compete directly with Budweiser, Miller used an introductory campaign for Meister Brau beer in which Budweiser was used strictly as a referent in comparative ads ("Meister Brau tastes as good as Budweiser, at a better price"). It is also interesting that the positive results for comparative ads in the Gorn and Weinberg study were obtained using a relatively subject/referent format. In each of these authors' ads, the challenger brand was used more as a subject and the leader was used more as a referent. Consistent with the predictions of the contrast model, the comparative ads produced a high level of perceived proximity. The only empirical comparison, however, was with noncomparative ads. Systematic differences in layout, particularly the subject/referent position of the products in the ads, were not studied.

Again, comparative ads should be viewed as a positioning tool. Using the contrast model as a guide, our concern is specifically with how the construction of comparative ads affects perceived position. Stated in research form, the hypothesis tested in the pilot study below is the following:

[H1]: When the products in a comparative ad differ in associated distinctive features, using the product with more distinctive features as a referent in comparison facilitates a strategy of association while using the same product as a subject using the same product as a subject facilitates differentiation.

To summarize, comparative ads may be an effective way to achieve product positioning goals. A direct measure of effectiveness in this case is the perceived proximity of the products in question. Moreover, control over the subject/referent position of products in a comparative ad may facilitate an increase or decrease in perceived proximity.

Pilot Study

Method and Design

As an initial test of the hypothesis, a pilot study was conducted involving the advertising of a new (hypothetical) cola soft-drink named "Sparkle". The market leader, Coke, was chosen as the comparison product to assure a difference in associated features. (The study was conducted prior to the introduction of New Coke). The subject/referent position of Sparkle and Coke was the only independent variable manipulated in four test ads. Two ads used Coke as the subject and Sparkle as the referent while two others used Sparkle as the subject and Coke as the referent. Two ads were used in each subject/referent condition to control at least somewhat for the effect of any particular execution of the subject/referent operationalization. In all four ads, three characteristics or aspects of Sparkle were advertised (Sparkle has half the calories, half the caffeine, and more cola taste than Coke).

In the first version of the Sparkle-subject/Coke-referent ads (Ad 1), a can of Sparkle appeared on the left with a copy line that read "Sparkle, the Cola for You (at the top of the ad) ... when Coke is just too much" (at the bottom of the ad). The three attributes were listed just to the right of the can (in the middle of the ad). In a second version (Ad 2), a can of Sparkle was presented along with the attribute information to the right of the can with a short copy line at the top of the ad reading, "Less...Yet More". In the first version of the Coke-subject/Sparkle-referent ads (Ad 3), two cans were shown, Coke on the left and Sparkle on the right. The copy line read "Is Coke too much? (at the top) and "Sparkle ... the Cola for You" (at the bottom). The attribute information was listed in between the two cans in the middle of the page. In the second version of the ad (Ad 4), only a can of Coke was presented to the left. The copy line at the top read "Too little with too much?" followed by "What has half the calories, half the caffeine, and more Cola taste?" to the right of the can, with "Sparkle...Less but More" at the bottom of the ad.

Objectively, in all four ads Sparkles' attributes place it somewhere in between regular colas (Coke as well as Pepsi and RC) and diet, caffeine free colas (e.g. Diet Caffeine Free Coke, Diet Pepsi Free). If the existence of asymmetric subject/referent perceptions is meaningful in a comparative advertising context, whether Sparkle or Coke are subjects or referents in an ad should result in very different positions. According to the contrast model, because Coke has so many distinctive features, using Coke as a subject in comparison with Sparkle should position Sparkle farther away from Coke (and,

perhaps, the other regular colas) than when Coke is used only as a referent. Using Coke as a subject should bring to mind many of Coke's distinctive features while using Coke as a referent should lower the weight consumers place on Coke's features.

Procedure

To test the hypothesis, a story board version of each ad (done professionally and in color) was shown to a separate group of student subjects in a classroom situation (n= 20, 17, 18, and 22 for the four ads respectively). The ads were shown using a slide projector for one minute. As discussed above, the relevant dependent measure for the marketing manager is the effect of the different ads on the perceived proximity (relative position) of the new soft-drink. After exposure to the ads, subjects in each condition were asked to rate the overall similarity among a group of twelve different cola soft-drinks that included both Coke and Sparkle on a seven point scale from 1 (very dissimilar) to 7 (very similar). These judgments were averaged across subjects within groups for analysis.

Analysis and Results

The main hypothesis [H1] is that the similarity of Sparkle and Coke will be higher, or Sparkle will be positioned more closely to Coke, when Sparkle is used as a subject rather than a referent in comparison. The average judgments across the ads support this hypothesis. When Sparkle was the subject, the mean similarities for Sparkle and Coke were 3.63 and 3.80 respectively for Ads 1 and 2. The corresponding figures for Ads 3 and 4, where Coke was the subject and Sparkle the referent, were 3.17 and 3.31. However, as similarity judgments are inherently relative, it is problematic to interpret these results out of context. In order to judge the significance of the results these differences must be viewed relative to the judgments for all the brands in the market.

To examine the perceived position of Sparkle that resulted from the ads, the similarity judgments for all possible pairs of colas were analyzed using an additive tree procedure (ADDTREE; Sattath and Tversky 1977). The length of the branches in an additive tree that separate different brands represent the perceived distance between the brands. Such an analysis helps determine the particular competitive structure of a market as perceived by consumers (i.e. brands on the same branches are more competitive than brands on different branches; Urban, Johnson, and Hauser 1984). Analysis of the resulting trees for each ad condition revealed differences in perceived market structure across the subject referent conditions but not across ads within each condition. As a result, similarity judgments were averaged across the two ads in each condition for analysis. The resulting trees for the Sparkle-Subject/Coke-Referent and Coke-Subject/Sparkle-Referent ads are shown in Figures A and B respectively (Kruskal's stress values of .061 and .058).

The results reveal an important difference in the perceived position of Sparkle in the two conditions which supports the hypothesis. When Sparkle is the subject of the comparison (Figure A), it is perceptually more competitive with Coke and the other regular colas than when Coke is the subject of the ad (Figure B). Apparently, the Sparkle-Subject ads were more successful in lowering the weight on the distinctive features of Coke than the Coke-Subject ads. The relative positions of Coke and Pepsi in the two solutions provide additional support for this interpretation. In the Coke-Subject ads, Coke and Pepsi are on different branches of the tree while in the Sparkle-Subject ads Coke and Pepsi are on the same branch. Put differently, when Coke is the subject of the ad, Coke has a more unique position in the tree.

Overall, this research presents a potentially useful approach for practitioners and researchers interested in comparative advertising. The contrast model provides guidelines for the construction of comparative ads to meet particular promotional goals. In particular, the subject/referent position of brands in an advertising comparison may have some effect on the perceived position of brands in a market. At minimum, the pilot study results reported here suggest that the hypothesis deserves further research attention. Within the context of a controlled experiment, the results were as predicted. Naturally, one can not make conclusions on the basis of one relatively artificial, small scale study. In a larger scale study, the authors are currently exploring the effects of subject/referent positioning in comparative advertising using more realistic methods and exposure conditions.

FIGURE A:
ADDTREE SOLUTION FOR SPARKLE-SUBJECT/COKE-REFERENT ADS

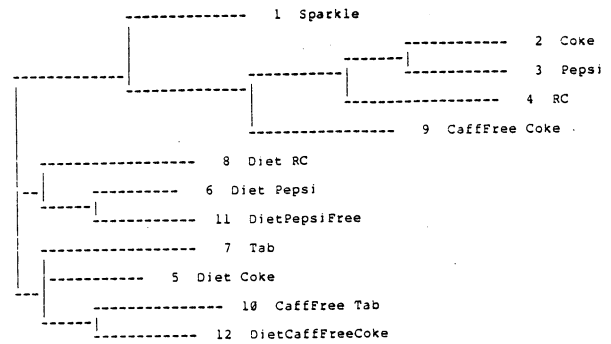
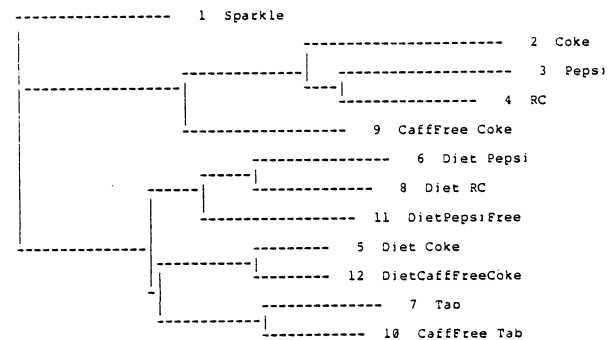


FIGURE B:
ADDTREE SOLUTION FOR COKE-SUBJECT/SPARKLE-REFERENT ADS



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THE EFFECT OF FRAMING AND ADVERTISING SEQUENCING ON ATTITUDE
CONSISTENCY AND BEHAVIORAL INTENTIONS

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Abstract

This study investigates the effect of framing and advertising sequencing on attitude consistency and behavioral intent. The results revealed that the sequence of exposure differentially impacted subjects' derivation of attitude and purchase intention consistency when using the unframed ad as the basis for product evaluation. As compared to viewing the unframed ad first, prior exposure to the framed ad had a stronger impact on the effect of the unframed ad on the formation of attitude consistency and behavioral intention. This is discussed in the context of the availability-valence hypothesis.

Introduction

Recent research clearly indicates that knowledge which is activated and available during evaluative processing strongly influences attitudinal judgments and attitude-behavior consistency. From both a theoretical and practical perspective it is valuable to understand what factors influence knowledge activation (i.e., information availability) and to further explore the effects of activated knowledge on attitude structures. This paper briefly reviews two sets of factors which have typically been suggested as influencing information availability--prior product-related experiences and stimulus factors--and explores the effects of sequence of advertisement processing.

Fazio and Zanna (1981) have presented a compelling argument for the idea that the relation between people's attitudes and their behavior will be stronger when they have formed their attitudes from direct behavioral experience with the attitude object than when they have only indirect experience. One reason for this is that direct experience seems to make more information about the object available to the person. That is, direct experience with an object appears to strengthen the associations that are made in memory about an object and so this attitudinal information will be more accessible and utilizable when behavior is contemplated (Kisielius and Roedder 1983). In a marketing application of Fazio and Zanna's ideas, Smith and Swinyard (1983, 1985) found that attitudes are more extreme and confidently held when subjects are exposed to product trial as opposed to advertising. Moreover, these authors observed that attitude behavior consistency was significantly higher for subjects exposed to the trial as opposed to the advertising condition.

Advertisers seldom have the opportunity to manipulate the type of experience which the readers have. However, advertisers can and do manipulate stimulus factors which can influence the amount and type of information which their readers activate while processing an advertisement. Kisielius and Sternthal (1986) suggest vividness of message information may be one such factor. They use the availability-valence hypothesis to explain the effects of message vividness on attitudinal judgments. According to this hypothesis, judgments regarding an attitude object are a function of the favorableness of the information which is most available during attitudinal judgments. Their work shows that vividness may affect the degree of message-relevant information which is retrieved from memory. When this information is favorable the attitude judgment will be positive. On the other hand, information which does little to create cognitive elaboration (i.e., pallid stimuli) results in

idiosyncratic associations with the brand. Such idiosyncratic associations are likely to be less favorable than the associations which reflect message-related content.

Another potential stimulus factor which can influence the availability of information is message framing. Edell and Staelin (1983) define an unframed message as one in which the pictorial content of the message is not related to verbal copy. A framed message is one in which the pictorial information is restated in verbal form. It seems likely that knowledge structures activated by processing framed messages would contain more product-relevant (and less idiosyncratic) associative pathways than those activated by the processing of unframed messages. This would result in a greater degree of accessibility to message-related information previously stored in memory. If the knowledge made available is favorable to the advocacy message (or if it leads to favorable cognitive responses), the resultant judgment would be positive; however, if the knowledge made available is negative (or encourages negative cognitive responses) the evaluation would be unfavorable.

A third factor which can influence the availability of information is the order in which messages are seen. Research by Webb (1979) and Aaker, Stayman, and Hagerty (1986) and Brooker (1981) suggests that the order of advertising exposure impacts message evaluation. Along these lines, the availability-valence hypothesis might be extended to help explain why advertising exposure sequencing differentially impacts judgments. If the knowledge activated by the first ad in a sequence remains available in the consumer's memory (i.e., establishes a "mind set"), then this knowledge may influence judgments about other ads in ensuing exposures. On the other hand, the current exposure in the sequence may have the most effect on consumer evaluation judgments due to its recency in memory. That is, the knowledge available to form judgments is strongly influenced by the information in the current advertisement. This notion is consistent with research on memory schemata which indicates that an activated schema (a mind set) can strongly influence how information is processed (e.g., Bransford and Johnson 1972, Dooling and Lachman 1971).

As has been noted, activated knowledge influences not only judgments, but attitude-behavior consistency (e.g., Kisielius and Roedder 1983). This suggests that understanding attitude-behavior consistency may require investigation of the factors which affect knowledge availability. The purpose of the current paper is to explore some of the factors which influence knowledge availability and their impact on attitude structure and attitude-behavior consistency. This should help to clarify when attitude-behavior consistency may be expected to occur.

Methodology

The data which are reported here for investigatory purposes were collected as part of a study investigating a related issue--the effects of level of expertise and sequence of exposure on evaluative ratings of framed and unframed pictorial print advertisements (Marks, Kamins, and Murphy, 1986). The focus of the current study, however, specifically considers the effects of message framing and sequencing on structure and attitude-behavior intention consistency.

Subjects

Subjects recruited from a large West Coast city participated in this study. This sample includes a cross section of subjects who represent a full spectrum of experience with the product presented in the ads. In order to obtain a broad range of experience, 116 questionnaires were distributed with self-addressed stamped envelopes. The questionnaires were left with the subjects to be filled out and mailed back later. Of these, 86 were returned and 60 were usable. This group contained 38 males and 22 females.

Stimulus Materials

The advertisements were developed to represent framed and unframed stimuli for computer software. The framed advertisement contained the headline "If you were able to do your work faster... what would you do with your new, free time???" Moreover, the ad contained twelve specific product claims and a small picture of two diskettes labeled with the name of the software (T-1000). The picture presented in the ad serves to reinforce the copy claims by linking the text to the visual image. That is, even without the advertising copy the picture indicates that the product is computer software and is called T-1000. The advertisement contained the tag line "T-1000 Software by MYKRO-COMP makes work go quicker. Call 1-800-SOF-WARE for more information."

In contrast the unframed advertisement was designed so that the picture was a source of distraction and not directly linked to any claims made in the ad. Specifically, the ad contained the same headline and tag line as the framed ad (with R-1000 in place of T-1000) but presented a large color picture of a male model engaged in down-hill skiing. Without exposure to the ad copy the picture alone would convey no information about the advertised product. None of the twelve specific copy claims made in the framed ad were made in the unframed ad.

Procedures

Data was collected through the use of a cover letter and questionnaire. Each questionnaire contained both the framed and unframed ad. However, in half of the questionnaires, the framed ad appeared first whereas the reverse was the case for the remaining questionnaires. The cover letter explicitly instructed subjects to read the first advertisement, and answer questions about it and then read the second ad and respond to questions relating to it. This approach does not directly control the sequencing of exposure to the treatments; however, it seems safe to assume that very few subjects (if any) completed the questionnaire from back to front. Thus, we assume that the subjects viewed the ads in the proper sequence.

In this experiment each type of ad can be viewed either with or without prior exposure to the other ad, depending on its position in the sequence. For example, when the unframed ad is viewed and rated first (i.e., in the unframed-framed sequence) the measures are independent of exposure to the framed ad. However, when the unframed ad is evaluated in the second position (i.e., in the framed-unframed sequence) evaluations are influenced by the knowledge activated during prior exposure to the framed ad. Therefore, when an ad is viewed first there is no sequence effect the ratings are a control for when it is viewed second. A final section appearing after exposure to both ads involved the collection of data measuring attitude importance judgments and demographic information.

Dependent Variable Measures

Measures of four specific dependent variables were taken (see Appendix). The first variable measured overall global attitude (Ao) on a seven point scale for the product advertised in each of the ads (excellent/

poor). The next dependent variable measured the subjects' evaluation of how satisfactorily the two advertised products performed on each of eight product-related attributes (Bi). The third dependent measure was the importance judgment of each of these attributes (Wi). These two measures were later multiplied and then summed in accordance with the adequacy-importance model of attitude (Engel, Blackwell, and Miniard 1986). The final dependent measure related to purchase intention (PI) which was measured on a seven-point scale (definitely would purchase/definitely would not).

Analysis Technique

A general path analysis model (Duncan 1960, Wright 1960) assuming a weak causal order and closure among the variables was used to model the linkages between the component measures of attitude ($\sum Wi \times Bi$) and the measure of global attitude ($\sum Wi \times Bi \rightarrow Ao$) and attitude-behavioral intention consistency ($Ao \rightarrow PI$). Path analysis was applied to the dependent measures under two distinct conditions. The two conditions analyzed related to the sequencing of exposure to the framed and unframed ad. That is, whether the framed or unframed ad was viewed first in the two exposure sequence.

Hypothesis

This study proposes that type of ad (framed vs. unframed) and order of presentation interact effecting both the subjects' attitude consistency toward the advertised products and the strength of the attitude-behavioral intent relationship. When a subject is exposed to the framed-unframed sequence and analysis is done on the product ratings based on the unframed ad, it is hypothesized there will be strong associations between weighted attribute attitude and global attitude as well as a strong causal and direct relationship between each of these measures and purchase intention. The previously discussed extension of the availability-valence hypothesis suggests that this would occur because the processing of the framed ad first will activate existing knowledge structures. Once activated, this knowledge would effect the subjects' processing of the information in the unframed ad. The result of this cognitive activity will be reflected in a consistency between attitude measures and ultimately purchase intention.

Subjects exposed to the unframed-framed sequencing and who rate the product after exposure to the unframed ad are hypothesized to have weaker associations between both attitude measures and between the attitude measures and purchase intent. Again, using the extension of the availability-valence hypothesis, exposure to the unframed ad should lead to the activation of relatively few message-relevant associations in memory.

Formally stated, we expect:

- H1: When the unframed ad is the basis for product evaluation in the framed-unframed exposure sequence, strong attitude consistency and relatively strong, direct, causal linkage between attitude measures and purchase intention will result.
- H2: When the unframed ad is the basis for product evaluation in the unframed-framed exposure sequence, weaker direct attitude consistency and weaker direct causal linkage between attitude measures and purchase intention will be observed relative to that found in H1.

When subjects utilize the framed ad as the basis for product evaluation in either sequence it is hypothesized that activation of knowledge associations will result in strong causal linkages within attitude measures and between each of the attitude measures and purchase intention. When the framed ad appears first,

it seems obvious that many message-related pathways will be activated in memory. When the unframed ad is viewed first followed by the framed ad, evaluations of the framed ad are still influenced by the activation of message-related associations. However, prior processing of the unframed ad results in activation of a schema containing relatively few message-related associations and so the linkages within attitude components and between attitude and purchase intention should be weaker than when the framed ad is viewed first. Therefore the following hypotheses are proposed:

- H3: When the framed ad is the basis for product evaluation in the framed-unframed sequence relatively strong attitude consistency and relatively strong causal linkage between attitude measures and purchase intention will be observed. All linkages should be positive.
- H4: When the framed ad is the basis for product evaluation in the unframed-framed sequence relatively weaker attitude consistency and causal linkage between attitude measures and purchase intention should be found relative to those observed in H3. All linkages should be positive.

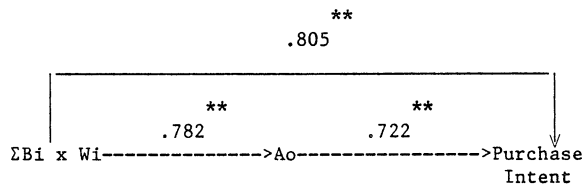
Results

The general path analysis models testing the four hypotheses are presented in Figure 1 (a)-(d). The statistics presented represent standardized regression coefficients between the variables in the model.

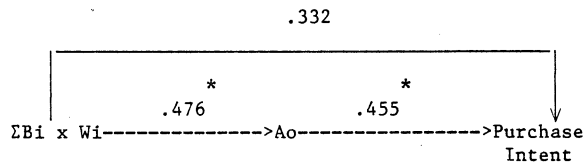
FIGURE 1

Path Models Describing Relationships Between Attitude Measures and Purchase Intent

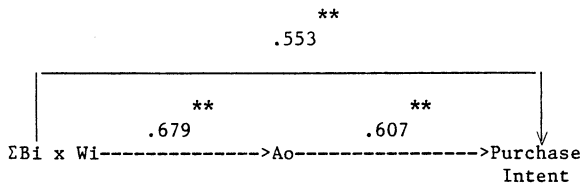
- (a) Framed-unframed Sequence: Unframed Ad Used As Rating Basis



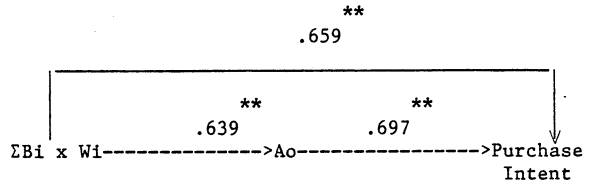
- (b) Unframed-framed Sequence: Unframed Ad Used As Rating Basis



- (c) Framed-unframed Sequence: Framed Ad Used As Rating Basis



- (d) Unframed-framed Sequence: Framed Ad Used As Rating Basis



- * Significant at the .05 level
 ** Significant at the .01 level

The data in Figures 1a and 1b show direct support for H1 and H2. When the unframed ad is the basis for product evaluation, the linkage both within attitudinal measures (EBi x Wi-->Ao) and between each of these measures and purchase intention (EBi x Wi-->PI and Ao-->PI) is stronger for the framed-unframed sequence. That is, for this framed-unframed sequence linkages are significant at an alpha less than or equal to .01 while for the unframed-framed sequence the level of significance drops to .05 for the linkage within attitudinal measures and between Ao and PI. Additionally, the linkage between EBi x Wi and PI is non-significant.

A Chow test (Chow 1960), was applied to determine if the relationship between identical pair-wise constructs (e.g., EBi x Wi-->Ao, for (a) and (b) in Figure 1) differed as a function of sequencing for those subjects who utilized the unframed ad as a rating basis. A single significant result was observed, indicating that the regression model of the relationship between EBi x Wi and PI differed as a function of sequencing (F=2.186, d.f.=25,33, p<.05). This significant result was determined to be a function of both the difference between beta coefficients (t=1.758, d.f.=56, p<.05) and intercepts (t=10.192, d.f.=57, p<.001). First, this means that attitudinal components were more strongly related to purchase intent when the framed ad was viewed first in a sequence using the unframed ad as a rating basis. Second, it indicates that initial attitudes were higher for those subjects who viewed the unframed ad first and used the unframed ad as a rating basis.

For the unframed-framed sequence approximately 22.6% of the variation in the EBi x Wi-->Ao relationship is explained, while for the framed-unframed sequence 61.1% of the variation in this relationship is accounted for. Likewise, EBi x Wi explains 11.0% of the variation in purchase intention (PI) in the unframed-framed sequence while explaining about 65% of the variation in the framed-unframed sequence. Finally, attitude toward the product (Ao) explains 20.7% of the variation in purchase intention (PI) in the unframed-framed sequence while accounting for 52.1% of the variation in the framed-unframed sequence.

Hypotheses 3 is supported by the data in Figure 1c, as when the framed ad is the basis for product evaluation linkages both within attitude measures and between the attitude measures and purchase intention are significant. Hypothesis 4, on the other hand, is not supported. This is because the linkages between the attitude measures and purchase intention are equally significant (alpha less than .01) for each of the sequences represented in Figures 1c and 1d. In addition, the magnitude of the correlation coefficients shows little visible difference between these sequence conditions.

A Chow test applied to determine if the relationship between identical pair-wise constructs differed as a function of sequencing for those subjects who used the framed ad as a rating basis found no significant differences. This provides further evidence that

sequencing did not differentially effect the relationship between constructs.

Discussion

The results of the study suggest that the order of sequencing in which the subjects viewed the framed and unframed advertisements did influence the consistency among attitude components and attitude-behavioral intention consistency. However, sequencing and ad format had a greater differential impact on attitude consistency and attitude linkage to behavioral intent when the unframed ad was used as the basis for product evaluation.

In fact, the strongest linkages between attitude measures and between the attitude measures and purchase intent were observed when the unframed ad was both utilized as the basis for product evaluation and appeared second in the exposure sequence. This finding provides strong support for the discussed extension of the availability-valence hypothesis. The framed ad served as a knowledge activation device impacting on the degree of influence the unframed ad had in the formation of product attitude and behavioral intention. When the unframed ad appeared first in the sequence, and was used as a basis for evaluation, attitude toward the product ($\Sigma Bi \times Wi$) was not significantly linked to purchase intention (PI) because the unframed ad did not cause substantial knowledge activation.

Finally, sequencing had a relatively small effect on the measures when the framed ad was used as a basis for product evaluation. This suggests that viewing the framed ad at either point in the exposure sequence may serve to activate the knowledge necessary to create a high degree of consistency among attitude components and a strong attitude-behavioral intent consistency.

The correlational findings observed in this study must be interpreted with caution. Stronger direct linkages between model components do not necessarily mean that framed ads should precede other advertising appeals in order to obtain more positive product attitudes or higher purchase intention. As reported in prior analysis of this data, initial exposure to a framed ad in an advertising exposure sequence results in lower attitude and product evaluations than initial exposure to an unframed ad (Marks, Kamins, and Murphy 1986). This was evident in the findings of the Chow test for the intercept terms across sequences for subjects who used the unframed ad as a rating basis. Thus, the high correlations reported in the current study could reflect both a less positive attitude and purchase intention. This means that when advertisers use framed appeals, they must take great pains to ensure that their product is presented and perceived in a positive light, since such appeals may well encourage processing of ad content in an active (and perhaps critical) fashion due to the establishment of an active mind set (i.e., the activation of many message-related pathways).

Limitations and Future Research

As was noted, the data presented in this paper was part of a study done to investigate a related area. It would have been desirable to have had multiple measures of overall attitude toward the object and behavioral intention. In addition, given the assumptions made about the activation of knowledge, the measurement of cognitions would have been appropriate (although such measures could well have biased the results if there is little initial knowledge activation encouraged by the ad). Also, the study would have been more realistic if actual behavior was measured. In spite of these problems, the results are interesting and suggest directions for future research.

The results of this study provide a foundation for further investigation of the effects of stimuli and sequencing of advertisement exposure on the activation

of knowledge and the effect of knowledge activation on attitude formation and attitude-behavioral intent consistency. Future research will have to consider whether the observed effects hold true for actual behavior, for longer sequences of ads, for media other than print, and for other types of products.

APPENDIX Dependent Measures

Global attitude toward the product (Ao):

What is your overall evaluation of the "T [or R]-1000" software?

excellent _____ poor

Evaluation of the product (Bi):

What is your expectation of "R [or T]-1000" software?

extremely "user-friendly" _____ not at all "user-friendly"

excellent documentation _____ poor documentation

well structured and designed software _____ poorly structured and designed software

high compatibility with other computer products _____ low compatibility with other computer products

efficient to use _____ inefficient to use

flexible output report formats _____ inflexible output report formats

state-of-the-art _____ out-dated

excellent technical support by vendor _____ poor technical support by vendor

Importance of the attributes (Wi):

How important are each of the following product attributes when you purchase software?

	No Importance	Slightly Important	Moderately Important	Very Important	Extremely Important
"user-friendly"	_____	_____	_____	_____	_____
good documentation	_____	_____	_____	_____	_____
well designed/structured software	_____	_____	_____	_____	_____
high compatibility with other products	_____	_____	_____	_____	_____
efficient	_____	_____	_____	_____	_____

	No Importance	Slightly Important	Moderately Important	Very Important	Extremely Important
flexible reporting capabilities	___	___	___	___	___
state-of-the-art	___	___	___	___	___
technical support by vendor	___	___	___	___	___

Purchase Intent (PI):

What is the probability that you would purchase this software if you needed to buy software?

definitely _____ definitely not

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EFFECTS OF VARIATION IN MESSAGE EXECUTION
ON THE LEARNING OF REPEATED BRAND INFORMATION

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Abstract

The research reported here examines the effects of varying the executions to which subjects are exposed when presented with three ads for a brand of liquor. Based on the encoding variability hypothesis it is proposed that presenting three different executions of an ad will result in greater brand recall than presenting the same execution three times. The results support this hypothesis. Other results suggest that these effects were not due to differential attention levels. Media scheduling implications and future research possibilities are discussed.

Introduction

A considerable body of literature has examined repetition effects (cf. Sawyer, 1981). Much of this literature has varied, in an experimental design, the number of exposures people receive. It has typically been found that increasing the number of exposures increases learning up to a point but beyond that point wearout occurs (e.g., Calder and Sternthal 1980).

Much less attention has been focused on the effects of varying the executions of repeated communications. For example, repetition studies that employ a 3 exposure condition typically show people the same commercial three times. This is fairly consistent with media scheduling because it is not at all uncommon to see the same commercial repeated on television even within the same half hour program. However, based on an encoding variability hypothesis (e.g., Melton 1967, Madigan 1969) to be discussed below, we would expect more learning to take place when people are exposed to three different executions of a commercial than when they are exposed to the same execution three times.

The objective of this research is to test these implications of the encoding variability hypothesis. In the paragraphs below we will first review encoding variability research and draw out its implications for scheduling repeated exposures to commercials. We will then generate and test the implications of hypotheses that follow from the encoding variability position.

Encoding Variability

The encoding variability hypothesis holds that when people are exposed to information more than once, the likelihood of retrieving that information subsequently is greater if the material is encoded differently (e.g., the to-be-remembered information is related to different stimuli or leads to different memory traces) on each repetition than if it is repeatedly encoded in the same way. The likelihood of an item of information being retrieved is believed to be directly related to the number of paths or ways in which the item is encoded.

Encoding variability research has proceeded in two different directions. One approach focuses on contextual variability and the other addresses semantic variability. According to the contextual variability position stimuli are said to be encoded and stored in terms of associations established between the various attributes of the word's context including nearby list words, task relevant thoughts, environmental distractions, etc. (cf. Anderson and Bower 1972, 1974). When a subject attempts to remember a word, he retrieves some of the contextual associations formed at encoding. The likelihood of recalling the to-be-remembered word is directly related to the availability of contextual information at the time the subject is tested.

Research showing that increasing the lag between exposures to a stimulus increases recall performance (Melton, 1970) is taken as support for this position. It is assumed that likelihood of contextual variability is directly related to the time interval between exposures.

Other research varies the stimuli associated with the to-be-remembered word. For example, Hintzman and Stern (1978) gave subjects the names of famous individuals to be remembered. The names were presented in brief sentences describing an action attributed to the individual. The sentences that occurred more than once were repeated either three or six times. At each frequency of repetition, the phrase accompanying the name either remained the same or was different each time. An incidental learning procedure was used with subjects required to rate the truth value of each sentence. It was found that subjects recalled the target words significantly better in the different sentence condition compared to same sentence condition. The authors argued that this was because of the additional paths or memory traces generated in the condition in which the phrase accompanying the to-be-remembered word differed in each repetition.

Glanzer and Duarte (1971) also obtained support consistent with encoding variability using bilingual subjects and bilingual word lists. They found that, under massed conditions, recall was better when words were repeated in a different language than when they were repeated in the same language.

Paivio (1974) varied both time lag between exposures and the stimuli associated with the to-be-remembered stimuli. He argued that pictures repeated as words and words repeated as pictures are more likely to result in variable encoding than presenting the same picture or word twice. It was found that under standard free recall conditions, word-word and picture-picture conditions were less than additive in their effect on recall at zero exposure lag, but became additive at long exposure lags. Picture-word repetitions on the other hand, were additive at zero lag as well as longer lags. Both of these findings are consistent with the encoding variability position.

To summarize, the encoding variability research indicates that when the time lag between exposures is short, pairing a stimulus with two different cues is more effective (i.e., results in more learning) than exposing people to the same stimulus-cue combination twice. It appears that each succeeding repetition of the same stimulus strengthens an existing memory trace by a smaller amount. However, when different cues are paired with the same stimulus, each cue results in a different memory trace. The likelihood of retrieving the stimulus is believed to be directly related to the number of traces involving that stimulus.

Advertising Implications

The research reviewed above has at least two implications for advertising. First, it provides a theoretical explanation for the well known finding that distributed exposure to advertising is superior to massed exposure (e.g., Zielski 1959). Encoding variability research suggests that the superiority of longer delays between exposure to advertising stimuli is due to the increased likelihood that the stimuli will be encoded differently on each exposure occasion.

Second, encoding variability research suggests that if time between exposures to advertising stimuli is controlled or held constant, more learning will take place when different executions of the ads are used than when the same ad is repeated. This is because the variation in executions would be more likely to lead to varied semantic encodings of the repeated information than the straight repetition of the same ad. These varied encodings should make the brand name and other information more accessible subsequently than they would be without variable encoding.

It is important to note at this point that the encoding variability explanation is an alternative to the possibility suggested by others (i.e., Calder and Sternthal 1980) that varied executions may be more effective because people will pay more attention to varied executions than to repetitions of the same execution. The encoding variability hypothesis does not implicate attention. In accordance with this position, support has been obtained for the encoding variability hypothesis while controlling for processing time (D'Agostino and DeRemer 1973).

Calder and Sternthal (1980) did manipulate whether people were repeatedly exposed to the same or different executions of ads for two products. However, no evidence was reported of differential attention to varied versus same executions of the ads, and the execution manipulation had no effect on attitude toward the product. They did find that exposure to varied executions led to more total thoughts than repeated exposure to the same execution. This finding is not inconsistent with the encoding variability position. However, the effect may have been due to the additional information contained in the several executions to which people in the varied execution condition were exposed rather than to the variable encoding of the repeated information.

Hypotheses

The preceding discussion leads to the following hypotheses.

First, it is expected that exposing people to three different executions of an ad will lead to greater brand name recall than exposing people three times to any one of the three executions.

Second, it is expected that exposing people to three different executions of an ad will not result in any greater self reported attention to the ads than occurs in the groups exposed three times to the same ad execution.

Both hypotheses one and two follow directly from the encoding variability research discussed above. The exposure to different ad executions should increase encoding variability of the brand name and therefore make the brand name more accessible at the post test than it should be for the groups given three exposures to the same execution. It is expected that this effect will emerge without differential attention to the ads as noted in hypothesis two. This is an important additional hypothesis because in the absence of contradictory evidence, differential attention could be raised as an alternative explanation to the encoding variability explanation maintained here. To help control for attention the Dewar ads were separated by a minimum of five different filler ads, and subjects were instructed to evaluate each ad as it appeared. Exposure time was controlled and set to be sufficient to allow subjects to read all the copy contained in the ads.

Third, it is expected that attitude toward the brand will be greater when people are exposed to three different executions of an ad than when they are exposed to three repetitions of the same execution.

This hypothesis is based on McGuire's (1969) model of information processing which posits a direct relationship between learning (i.e., comprehension) and message acceptance (i.e., yielding). It is expected that material conveyed in the ads employed in this research will have

favorable implications for the product. Therefore, similar effects are predicted for both learning (measured by brand recall) and attitude toward the product. While a number of studies have failed to find a direct relationship between learning and attitude (e.g., Petty, Cacioppo and Heasacker 1981) others have found such a relationship (cf. Eagly and Chaiken 1984). It is expected that a direct relationship will be obtained in this research.

Method

The hypotheses were tested using a completely randomized (i.e., single factor) experimental design. Seventy four Ohio State University undergraduate business students participated in this research to earn extra credit toward their course grades. All subjects were assigned to one of the four between subjects conditions of the study. In each condition, subjects were asked to evaluate a set of ads that they would be shown. They were then shown a set of 25 slides for 15 different consumer products. Each slide was held on the screen for 25 seconds. The twenty five second exposure time was necessary to allow the students to read the copy contained in the ads.

The critical ads in this experiment were those for Dewar's Scotch. All other ads were fillers. In all cases the Dewar's White Label Scotch ads were the sixth, twelfth and nineteenth of the twenty five slides shown. Filler ads included three repetitions of two other liquor brand ads, three repetitions of two other nonliquor ads and ten other consumer brand ads which were shown once. In condition one subjects saw the 25 slides including three exposures to a single execution (execution A) of an ad for Dewar's White Label Scotch. Subjects in condition two saw all the same slides in the same order except that they were exposed three times to execution B of the Dewar's White Label Scotch ad. Subjects in condition three saw all the same ads in the same position except that they were exposed three times to execution C of the Dewar's White Label Scotch ad. Subjects in condition four were exposed to all the same filler ads, and they were exposed once to each execution of the Dewar's White Label Scotch ad. In this last condition order was counterbalanced so that half the subjects saw A then B then C while the other half saw B then C then A.

The three Dewar's White Label Scotch ads contained the same illustration of the product and the same headline "Dewar's Profile." All three ads referred to the Dewar's brand name in the same way, with the same size print and used the brand name the same number of times. The ads differed only in terms of the person pictured (e.g., Gayle Sayers) and the description of the person's characteristics.

After subjects saw all 25 ads they were given a questionnaire in which they were asked to list the names of all the brands that were advertised. Another later question asked people to list the brands of liquor ads they remember having seen. They were also asked to rate Dewar's Scotch on a set of seven point bi-polar adjective scales. The scales were labeled good-bad, undesirable-desirable, rewarding-punishing, worthless-valuable and positive-negative respectively. Similar scales have frequently been employed to measure attitude (e.g., Ajzen and Fishbein 1980). Their reliability in this research will be assessed in preliminary analysis.

Finally, subjects were asked to respond to each of the following questions addressing attention on 7-point scales varying from strongly agree (1) to strongly disagree (7):

- (1) "I paid as much attention to the second and third repetitions of the Dewar's ad as I did to the first,"
- (2) "I found the third repetition boring, so I did not pay any attention to it."
- (3) "For all ads that were repeated, I did not pay any attention to the second and third repetitions."

Results

The Reliability of the bi-polar scales used to measure attitude toward Dewar's Scotch was assessed. The analysis yielded a coefficient alpha of 0.95. Based on this analysis it was concluded that the scale provides a reliable measure of the evaluation of Dewar's Scotch and mean scores across the five bi-polar adjective scales were calculated for each individual.

For both unaided and aided brand name recall, each subject was given a score of 1 if Dewar's Scotch was recalled and a score of 0 if it was not recalled. The aided and unaided recall data were then transformed using an arc sin transformation to stabilize variances and permit use of analysis of variance to test hypotheses.

Hypothesis Tests

Hypothesis one holds that brand name recall will be greater in the condition in which subjects are exposed once to each Dewar's execution than it will be when people are exposed three times to any one of the executions. This was tested first with unaided brand name recall and then with aided recall. The percent recalling the brand name for each condition is shown in Table 1.

After arc sin transformations were performed the unaided recall data were analyzed using a completely randomized (i.e., single factor) analysis of variance with four levels. The ANOVA yielded an F-ratio of 17.26 (df=3, 70) which was significant ($p < 0.001$). The percentages shown in Table 1 indicate that the effects were in the expected direction. Pairwise contrasts were run using the Newman-Keuls multiple comparison test. The percent recalling Dewar's White Label Scotch in condition 4 (the condition in which people were exposed once to each execution) was significantly higher ($p < 0.05$) than in any other condition. This supports hypothesis 1 with the unaided recall data.

The arc sin transformed aided recall data were also analyzed using analysis of variance. This analysis yielded an F-ratio of 14.86 (df=3, 70) which was significant ($p < 0.001$). Again pairwise contrasts were run using Newman-Keuls multiple comparison test. Condition 4 (the condition in which people were exposed once to each execution) yielded a significantly higher percent correct brand name recall than any other condition. No other contrasts were significant. Again this supports hypothesis 1.

Hypothesis two held that there would be no difference between conditions in self reported attention to the ads. To test this hypothesis, separate analyses of variance

were conducted on each attention question (see Table 1 for means). No significant differences were obtained for any of the three attention questions. These results support hypothesis 2 and show that the recall effects occurred in the absence of any differences in self reported attention.

Hypothesis three was tested by performing an analysis of variance on product evaluation scores (see Table 1). Although the means were in the expected direction, the analysis of variance was not significant. Thus we must reject hypothesis three.

Discussion and Conclusion

The data analyzed here provide consistent support for the contention, based on encoding variability, that varying the executions of the ads to which people are exposed will increase the brand recall that results from that exposure. Failure to obtain significant differences on the attention measure suggests that the recall results are not due to the amount of attention paid to the ad. Thus, the results support the encoding variability position that varying executions will provide a richer network of memory traces involving the brand name and this will increase brand name accessibility.

Brand recall was used here not only because the encoding variability hypothesis makes clear predictions about this variable but also because the number of exposures to brand name was controlled in this experiment. Each execution referred to the brand name the same number of times. Hence it could not be argued that varying the executions biased the results obtained with this variable. However, had we used some other variable, such as the total amount of brand related information recalled, it could be argued that obtained differences were due to exposure of subjects to more information in the varied execution condition. The brand name recall variable employed here is not subject to this criticism. Another unbiased measure that could be used in future research would be recall of just those copy points that are repeated the same number of times in each execution.

It may, perhaps, be argued that we did not obtain significant differences with our attention measures because the measures were not sufficiently sensitive to pick up those differences. While this kind of rationale is always a possibility whenever results support a null hypothesis, we regard this argument as quite speculative. Other types of manipulations have been found to produce significant differences with similar types of self report measures (e.g., Petty and Cacioppo 1979; Petty, Wells and Brock 1976.) Nevertheless, it would be useful in further research to employ more sensitive measures of attention such

TABLE 1
MEAN SCORES AND PERCENTAGES
FOR DEPENDENT VARIABLES BY CONDITION

Dependent Variable	Condition			
	(1) Three Exposures to Execution	(2) Three Exposures to Execution	(3) Three Exposures to Execution	(4) Three Exposures to Each Execution
	A	B	C	ABC
Unaided Recall	58%	63%	44%	89%
Aided Recall	53%	63%	67%	89%
Evaluation	4.27	4.58	4.49	4.86
Attention # 1	5.32	5.05	4.78	4.56
Attention # 2	2.79	3.68	3.61	3.94
Attention # 3	4.68	5.11	4.78	4.89
Sample Size	19	19	19	19

Note: The attention question numbers correspond to the numbers used in describing the measures of attention in the method section. Strongly agree was scored 1 and strongly disagree 7.

as the secondary task technique, eye movement observations and/or various physiological measures (cf. Cacioppo, Petty and Shapiro 1983).

It was rather surprising, given the recall results, that no effect of the execution manipulation was obtained for attitude. Because the means were in the expected direction and a relatively small sample size was employed here, future research using larger samples may uncover such an effect. However, the failure to find a significant relationship between recall and attitude is certainly consistent with the contention made by others (e.g., Petty, Cacioppo and Schumann 1983) that there is no necessary relationship between recall and attitude.

The results of this research provide clear implications for media planners. They suggest that when repetitions are planned in close proximity to one another the executions of those repetitions should be varied. This should result in greater brand name recall for the reasons addressed earlier.

This does not necessarily mean, however, that a larger number of executions must be produced. The encoding variability research reviewed earlier indicates that if a sufficient time delay is provided between exposures to the same stimulus, results should be similar to those obtained here for different executions. This is because, as time increases, the context in which the information is taken in and the interpretation of the stimulus are likely to differ from the context and interpretation that occurred the first time the stimulus was presented. This suggests, then, that a media plan involving executions A, B and C would be more effective if scheduled in the pattern of A, B, C, A, B, C, A, B, C rather than the pattern A, A, A, B, B, B, C, C, C. While it remains for future research to establish the superiority of the former pattern, it is consistent with the encoding variability literature and the results of this study.

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COPY TESTING, THOUGHT ELICITATION AND ATTITUDE THEORY:
TWO'S COMPANY, THREE'S A CROWD

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Abstract

A number of thought elicitation coding schemes have been proposed by academics and advertising researchers to study the effects of advertising copy. Few of them appear to have as strong a conceptual foundation as they might. An alternative three-phase coding scheme is proposed that is based on several attitude theories and a study to test the coding scheme and several thought elicitation task instructions is described.

Introduction

Over the last decade interest in specific aspects of attitude theory peaked and now seems to be in decline amongst marketing academics and researchers. It has partly been replaced by an interest in memory processes, often involving the use of thought elicitation measurement techniques. Thought elicitation is a rather fancy name for asking the subjects to think out-loud or to retrospectively write down all the thoughts that came to mind or that are still coming to mind related to a topic or a stimulus object. They are sometimes also called verbal protocols or cognitive responses (Ericsson and Simon 1984).

Just exactly what thought elicitation measures seems to depend very much on the nature of the task and instruction set. It is a way (perhaps the only way) of attempting to capture a stream of mental consciousness whose structure and valences can be analyzed. Inferences about memory structure, cognitive schema, beliefs, attitudes and values can be made from such structural categorization.

Surprisingly, there appears to have been little effort directed at developing thought elicitation coding schemes based on basic attitude theory. The reasons for such a lack of effort are probably numerous. Attitude theorists may not believe that unstructured, introspective verbal responses can be used to measure attitudes. Most attitude models require the use of semantic differential scales that are analytically more tractable. The major issues have been choice of such scales to represent "means" and "ends" constructs and the combination of such operational measures for diagnostic and predictive purposes. It may also be simply a lack of temporal intersection between a measurement fad (thought elicitation) and a theoretical fad (attitude modelling) that used a very different approach to measuring attitudes. An intriguing related question is whether measurement method myopia has limited the development of attitude theory? If so, it is an example of how theory can be constrained by measurement rather than vice-versa (Anderson 1985).

Meanwhile, advertisers and their agencies continue to wrestle with the vexing question of how to better test advertising copy. Over \$200 million is spent annually on copy testing. Lipstein and Neelankavil (1984) state that simple copy-point playback is the main measure used to test copy effectiveness. Reactions to the product and commercial are also often measured. Misunderstanding of messages is claimed to approach 20% in copy-point playback. This helps to explain advertisers' focus on simple message transmission tests of the effectiveness of rough executions and finished commercials. Applied advertising researchers do appear to implicitly accept that measurement should be based on some theory or model of persuasion. Like their academic colleagues, however, there is not a lot of published evidence that when they use thought elicitation, their coding of the responses is based on well accepted attitude or information processing theory. This paper explores whether more theory based thought elicitation coding schemes can be devel-

oped for advertising copy testing and how they might be tested against current coding schemes.

What if thought elicitation cannot be used to operationalize attitude constructs such as beliefs, values, feelings and intentions and their relationships? Does this reflect poorly on thought elicitation or the attitude theory? Most scholars would probably question the method rather than the theory, for an intuitive concern with thought elicitation is that they are a restricted or filtered dump of thoughts and mental schema. Consequently thought elicitation do not reflect natural structure. We discuss how this concern might be examined by manipulating the task instructions to encourage thought elicitation that are streams of consciousness (like James Joyce's writing style!) rather than a list of collected and composed, staccato statements.

First, we review conventional thought elicitation coding techniques. We then offer two alternative theory based coding techniques based on Fishbein and Ajzen (1975) and Rosenberg (1956) and discuss how involvement and centrality should affect verbal protocols. An experimental study that will compare three different thought elicitation coding schemes across four different task instruction sets is then described.

Thought Elicitation Coding Techniques

Thought elicitation coding schemes have categorized thoughts under various labels such as counterarguments, defensive reactions, favorable thoughts, neutral thoughts and recipient generated thoughts. For example, Wright (1973) utilized a simple coding scheme consisting primarily of counterargument, source argument and source derogation. He showed that this coding scheme could be used to measure the mediating effect of responses to ad intention on both formation of attitude toward a product and intention to purchase the product. He also found by using subjects' categorization of their thoughts as to whether they were advertisement-originated, recipient-modified or recipient generated (e.g., past product experience), that only recipient-modified or generated thoughts had a significant effect on attitude and intention.

Cacioppo, Harkins and Petty (1981) suggest three dimensions that they claim to be orthogonal and capture the essence of previous classifications of cognitive responses to persuasion. The first dimension is Polarity, the degree to which the statement is in favor or opposed to the advocacy. The second dimension is the Origin of the thought. It can be direct copy-point playback, a modification of or reaction to the advertising copy, or a statement pertinent to the issue (e.g., recall of a past product usage experience or evaluation) but not directly related to any parts of the advertising copy. A classification problem with the first two dimensions is how does a judge code the polarity of a thought which may have a valence but the thought is unrelated to the advocacy? The third dimension, Target, defines the focus of attention of the thought. It can be the product, or a particular feature or component of the ad such as a comment on the medium, the picture, text, spokesperson, layout, print style, or even a comment about the audience the ad appears to be directed toward. The authors suggest that other dimensions such as saliency and emotionality might also be used. The structure of the verbal protocols can also be studied (see Zajonc 1960) by measuring the number of distinct thought topics (differentiation), number of themes within a thought topic (complexity), the logical dependency between thoughts (unity), and the integrative

dominance of a particular thought over other thoughts (organization).

Ostrom (1969) used a theory based coding scheme not to categorize individual thoughts but 168 verbal statements of "attitude toward church" whose source was not disclosed. Expert and naive judges classified the statements using the tripartite (cognitive, affective, conative) classification of attitudes (Allport 1935; Rosenberg and Hoveland 1960; McGuire 1969). Perceptual responses and beliefs are classified as cognitive. Feelings, sympathetic nervous responses and verbal statements of affect are classified as affective. Behavioral intention statements are classified as conative. It was found that highly reliable classification results can be obtained using even relatively untrained judges. If the tripartite classification scheme can be used to classify an assemblage of attitude statements (that are then used to create conventional attitude measurement scales) there does not appear to be any reason why the classification scheme cannot be used to reliably categorize a single individual's verbal protocols or elicited thoughts.

Other verbal protocol coding schemes have been used in consumer information processing research but they have been designed to study memory or cognitive processes rather than persuasion. Bettman and Park (1980) distinguished between brand and attribute processing as one dimension and between personal relevance and message source relevance on the other dimension. Their scheme is not particularly relevant as it was developed to study internal and external search patterns and linear compensatory choice processes rather than identifying key phrases in ad copy that trigger attitude formation and change. They do, however, provide encouraging evidence that much more can be extracted from verbal protocols than simple meaning or valence.

Alternative Theory Based Coding Schemes

In addition to a tripartite coding scheme, two other coding schemes can be derived from attitude theory. Fishbein and Ajzen (1975) conceptualize attitude as "the amount of affect for or against some object." A simple frequency account of pro and counter arguments has been found to be as satisfactory a measure of the persuasive impact of a message as any technique to date (Cacioppo, Harkins and Petty 1981). This may be because this measure, in large part, operationalizes the above definition of attitude. The question is whether it can be improved on using more of Fishbein and Ajzen's conceptual framework? Their constructs build on the tripartite model except they call cognition, belief; affect, attitude, and conation, intention. Using an information-processing approach they claim that attitude toward an object is based on salient beliefs about that object. Attitude is produced from a set of beliefs (expectancies and values), and intention in turn from attitude.

If elicited thoughts tap into attitude structure and mental scheme, can they reveal not only salient beliefs, attitudes and intentions that result from exposure but also evidence of the connections between these constructs? For example, a stream of thoughts (consciousness) that first describes a belief about a brand attribute or performance, then an expression of liking for the brand because of the attribute and finally an expression of intent to buy the brand, captures the salient belief, attitude and intention. Just as importantly it demonstrates the relation between the belief, the attitude and the intention that is theorized in Figure 1.1 in Fishbein and Ajzen (1975, pge. 15). It should be noted that the subject is not being asked to report the effect that his or her beliefs had on attitude and intention. This is fortunate for Nisbett and Wilson (1977) have convincingly demonstrated that subjects are very poor at such introspective skills. But just as motives and behavior are ascertainable from analysis (Freud 1924) and beliefs and attitudes can be derived from both verbal protocols and prompted measurement scales, perhaps the connectedness between beliefs, feelings, attitudes and intentions can

also be tracked using verbal protocols. The contiguity of thoughts, the grammar and the evident logical flow provide us with direct measures of the schematic relationship between these constructs.

An alternative means-end model of attitude (Rosenberg 1956; McGuire 1969) would suggest coding the thoughts that arise as the result of exposure to advertising copy into statements that describe brand features, and statements that describe the benefits that result from the use of the brand. When an elicited thought contains an advertised brand feature statement connected to a resulting benefit connected to an expression of affect toward such a benefit then this would appear to be: (1) clear support for the means-end (instrumentality-value) attitude theory, and (2) clear evidence that a particular part of the advertising copy has had a powerful persuasive impact.

Caveats and Compromise

Some may consider that we are far too ambitious in our attempt to extract so much information out of thought elicitation. This may be true. Certainly, such a measure will not capture sensory derived feelings that cannot be adequately articulated. How can anyone adequately describe, in words, how they feel when they; see the Lincoln Memorial in Washington, smell the sap from the Christmas tree, listen to Beethoven's Fifth, or sip a gin and tonic as they watch the sun set over a South Pacific ocean? Poets make a living out of almost succeeding, which only serves to prove how rare is such verbal skill. So there will be errors of omission and commission. The question is whether these errors will be any greater or perhaps even less than measuring attitude and testing different attitude models by using batteries of measurement scales and correlational analysis. None of the techniques seem to adequately capture the impact of "feeling" ads (Mitchell 1985).

At least the saliency and potency of beliefs can be directly observed in verbalized thoughts. A severe limitation of conventional attitude measurement is that it can prompt subjects to consider beliefs that otherwise never would have factored into their attitudes. It also relies heavily on correlational relationships to establish the potency of beliefs on attitude. There is also no escape from the fact that asking subjects to weight the importance or value of beliefs really stretches our introspective abilities. In short, we consider that if we can elicit information rich thoughts (and that is a big if) we will not be leaning on the data any more than conventional attitude researchers.

A further point that can be made in support of using thought elicitation to explore deep attitude structure is that prominent attitude researchers have already recommended using dimensions of such cognitive responses, other than content analysis, to examine attitude. They have suggested studying the range, hierarchy and interrelationships of different thoughts. Our suggested classification scheme seeks to identify logical chains of thought that flow from belief to affect or even belief to intentions. It is no less objective than the above structural dimensions of an individual's verbal protocol.

In a recent review paper Mitchell (1985) has raised some interesting attitude influence issues that should be able to be studied using measures of verbal response to advertising copy. He points out that thought elicitation cannot be expected to measure the effect of low involvement processing of an advertisement because, by definition, low involvement seems to mean minimal thought about the ad, during or after exposure. However, what thoughts that do occur should be directed at message elements and the source (spokesperson) rather than the message according to Gardner, Mitchell and Russo (1978) and Petty and Cacioppo (1981). This would further suggest that thoughts recorded after exposure to an ad might be appropriately categorized into beliefs and attitudes about the ad and beliefs and attitudes about the product (see Batra and Ray 1983). This would dichotomize Cacioppo, Harkins and Petty's (1983) "target" dimension. The prediction is that the increased impact of attitude to the ad on final pro-

duct attitude should show up in the verbal protocols of the subjects in low involvement conditions.

Involvement, Centrality and Thought Elicitation

What should verbal protocols reveal when involvement is high and the copy has an impact on central attitudes. Self-schema theory (Markus 1980) tells us that individuals create and use knowledge structures built around self experience to facilitate processing of incoming relevant information and subsequent retrieval of such information during a recall task. Rogers, Kuiper and Kirker (1976) note that, "the self appears to function as a superordinate schema that is deeply involved in the processing interpretation and memory of personal information" (p. 677). They found that self-referencing induced superior incidental recall compared to purely semantic rating tasks. If, when exposed to an advertisement, an individual relates the message to himself or herself then the involvement of the person should be high and the impact should be greater on central attitudes (Krugman 1964; Olson 1984).

McConville and Leavitt (1968) found that meaningfulness, as measured by the number of "related references" made by subjects in response to questions asked after exposure to an advertisement, can be used to predict recall of message content. Advertisements which enable subjects to make more connections between products and product claims facilitate recall. Leavitt, Waddell and Wells (1970) contended that Krugman's involvement measure assessed reaction to the ad rather than to the product in the commercial. They devised a Personal Product Response (PPR) protocol coding scheme to assess product connections. Rules of coding judged the use of the first person singular or plural and personal product experience thoughts to be personal product links. Batra and Ray (1983) also attempted to do this to a limited extent.

A View Response Profile (VPR) based on coding thoughts has found that personal relevance of the product message is a major factor in explaining the effective impact of ads (Schlinger 1979; Olson 1985; Olson, Schlinger and Young 1982; Olson 1984). Other similar techniques have also indicated the importance of personal relevance (Moldovan 1985). Relevance measures the connectiveness of the consumer to the use or benefit described by the ad. It may relate to past, current, or future use and involves associations contained within the self-schema of relevant experiences. The VPR was derived from the work of Wells (1964) and Leavitt (1970) who developed sets of ad response scales that revealed the influence of advertising "meaningfulness" and "personal relevance". Such scales indicate the personal relevance of an ad but they do not show which portions of an ad are more relevant and telling in their impact. Establishing such connections is very important to copy writers who spend hours seeking and crafting phrases and images that will spark such associations. Verbal protocols are more likely to reveal the "hot" copy or features in an ad.

It would appear to be worthwhile to overlay a personal involvement coding scheme on top of any scheme that identifies beliefs, affect, intentions and their connectedness. Cacioppo, Harkins and Petty (1981) claim that the greater the topic importance the more likely it is that the polarity of the cognitive responses will predict attitude change, as conventionally measured. In other words, evidence of personal involvement in the elicited thoughts should power up the explanatory effect of the thoughts on attitude change. But this may only occur if the source of the thought is from the advertisement. Thoughts about previous personal purchase experience may reinforce rather than change previously held attitudes, making them more central and resistant to change. Consequently any personal involvement coding scheme should also be crossed with source categorization, to identify the involvement impact of specific copy claims separately from the subject's general usage involvement with the product category.

If the elicited thoughts: (1) do not reveal involvement or attitude centrality through the use of the first person in the thoughts and other cues, or (2) such personal connections are observed not to be related to attitude formation or change, then either the theories of involvement and attitude centrality are not supported or the measure does not capture the dominant features of mental schema that produce attitude.

A Test of Coding Schemes and Instruction Sets

In our proposed study we intend to examine whether we can: (1) elicit richer thoughts by changing the task instructions, and (2) evaluate a phased means-end coding scheme against the more conventional coding scheme proposed by Wright (1973) and the scheme indirectly proposed by Ostrom (1969). We will also block subjects by their self-reported involvement and prior product familiarity.

As previously mentioned, task instructions have been shown to affect cognitive responses. Instructions to "gather your thoughts" and then write them down on a sheet, which often has a prenumbered space for each thought, discourages spontaneity and continuity, and encourages filtering, construction and disjuncture between the thoughts. We propose four between subject instruction set manipulations to explore the reactivity of subjects and whether richer data (that provides much more information) can be elicited by the use of different thought elicitation instructions.

There will be two test ads in the initial study. The order of presentation will be controlled and factored into the analysis to study task learning effects. After exposure to each test advertisement, subjects will be asked to either think out-loud or write down their thoughts. Exposure time and response time will be limited to a maximum (but not minimum) number of minutes. In this study subjects will know before hand that the intent is to obtain their reactions to an advertisement. We make no attempt in this study to disguise the task at the outset for several reasons. First, most of what we know about cognitive responses has come from persuasion studies that did not disguise the intent of the study. Subjects expected to have to react to the material. Second, if we cannot observe and record interesting theory based dimensions in the thoughts of subjects who expected to have their opinions measured then there is little hope of using the technique in situations with surprised and naive subjects. We accept that we are testing the method under favorable conditions. Third, much of the applied industry advertising copy testing is undertaken in situations where the subject is well aware of the purpose of the exercise.

Instruction Set Manipulations

The first instruction set condition will involve a minimal prompt to write down or verbalize all thoughts about the advertisement and the topic. The majority of our study will involve subjects writing down thoughts in a group session but we intend to also obtain the oral thoughts of subjects (that will be taped and then transcribed) in individual testing sessions. We expect that we will observe more connections when subjects think out loud compared to when they write down more "composed" thoughts. The second instruction set condition will involve a much more detailed prompt. It will start with the minimal prompt but then elaborate in the following manner:

"On the following pages please write down all your thoughts about the advertisement and the advertised product. This should include everything you thought about while reading or examining the advertisement, including information about the product, its brand name, its features, the claims made about the product, the benefits that would result or would not result if you or other people used the product, the benefits and disadvantages of the various features of the product, and your feelings about trying, buying and using the product. If certain features of the ad or phrases in the ad impressed you, and now come to mind, then tell us also about them. Don't feel you have to compose your

thoughts. Just write down your thoughts as they come to mind. Never mind about the spelling or the grammar for we are much more interested in you telling us all your thoughts and how they flow together."

Having read this instruction set several times, subjects will be asked to turn the page and will not be allowed to refer back to the instructions. This is to prevent diligent subjects from systematically providing all of the requested information, even in the correct order! The third condition will involve providing the subjects with the task instruction set to read several times before exposure to the test ads. In the final condition, subjects prior to the exposure to the test ads will also be given a demonstration ad and then three examples of especially composed verbal protocols. One will be typical of the usual verbal protocol obtained under the minimal instruction set. It will be rather terse and short. At the other extreme will be a long and rich verbal protocol that contains beliefs, feelings and intentions connected together using the first person. The third protocol will fall between the other two in terms of the richness, openness and flow of the responses. It is anticipated that the prior illustrated explanation of what will be sought may relax some subjects suffering from evaluation apprehension, may shape the way that others attend and react to the ad but will generally encourage subjects to be much freer and open in their thoughts than they otherwise might have been. We are fully aware of the demand characteristics of this manipulation and in fact it was created to observe the effect of providing these "leading" protocol examples ranging from high to low in their "structural" richness. All reactive copy testing can be criticised for its demand characteristics and the recommended method of studying and hence controlling such effects is to deliberately manipulate the factor. Contrast tests will be run between conditions 1 and 2, 2 and 3, and 3 and 4 to explore the incremental effects of explaining what information is being sought and providing demonstration examples of several verbal protocols. Providing the example ad and verbal protocol responses after exposure to the first test ad would interfere with the recall of information and reactions to the first test ad and for this reason was not considered to be a viable manipulation

The Tested Coding Schemes

Three schemes will be used to code each of the subjects' responses. The first "affect scheme" will use the conventional pro and counter argument approach advocated by Wright (1973) but will include coding thoughts by their source and whether they are directed at the product or features of the ad (see Batra and Ray 1983). The second "tripartite scheme" will use the approach developed by Ostrom (1969) but will also code the thoughts by their source and whether they are directed at the product or the ad. The third will test a new coding scheme that we have developed (see Table 1). It is different in several ways from the above two schemes. First, it will involve three sets of judges each making separate but phased sweeps of the subject's thoughts. We believe that this will make the coding task much easier and also increase inter-judge reliability.

The first judge will be asked to code the thoughts following the "tripartite scheme". The second judge will then be asked to take the output of the first judge and code the extent to which each thought identified by the first judge is personalized (i.e., was it expressed in the first person, did it refer to personal consequences, events or outcomes). The third judge will measure the extent to which the thoughts, if any, flowed in means-ends chains. For example, a thought that connects a feature to the advertised brand is evidence that the feature is salient and that the subject believes the brand possesses such a feature. A brand-feature thought connected to a benefit outcome would constitute evidence that (a) the feature is salient and the benefit is salient, and (b) direct evidence of feature instrumentality and hence direct evidence of an instrumentality-value based cognitive schema and attitude

structure. If the benefit is connected to the self then this is suggestive of an internalization or centrality of the I-V structure to the self and clear evidence of personal relevance. Such a thought chain that concluded with some statement of purchase interest or intent would be considered to be evidence that the advertisement has had a powerful impact on persuasion. Each of these possible types of combinations of thoughts will be searched for and coded by the third judge. Our scheme enables the measurement of the impact of advertising copy on: (1) product knowledge, (2) beliefs, (3) affect toward the product and the ad, (4) intentions, (5) personal relevance, and (6) causal means-end thought chains that explain the origin of any expressed affect and intentions.

Analysis

After the subjects have completed the thought elicitation exercise they will be asked to complete a battery of standard measures of beliefs, values, attitudes and behavior intentions toward the target brand, a set of measures of attitude toward the ad and a set of product familiarity and involvement measures. It is also hoped that arrangements can be made to obtain a direct behavioral response measure by offering coupons offering major price discounts off the advertised test products in lieu of payment for participating. Mitchel (1985) has stated that we need many different response measures in advertising studies and that correlational methods need to be used to examine the relationship between these variables. It is our objective to determine whether we can obtain higher correlations between various measures derived from our proposed verbal coding scheme and the later measures of attitude, intention and behavior, compared to the correlations between measures that we can derive from the other two coding schemes and the later measures. We are also interested in observing whether the task instruction manipulations influence such relationships.

Conclusion

Aside from testing the effects of task instructions and the convergent validity of multiple measures, we are most interested in seeing whether we can directly observe, in the structure of subject's thoughts, what might be predicted by well established attitude theory. If we can't and yet the conventional measures and attitude modelling suggest such structure then there are at least two rather unpalatable competing explanations. Either thought elicitation cannot capture deep attitude structure (and if this is so then how deep do any verbal protocols probe in capturing any structure?), or the thoughts do reflect substance and process and are a challenge to attitude theory that has been tested using mainly correlational relationships between combinations of batteries of measures. One possibility is that relationships between beliefs, values, attitudes and intentions operate at a non-verbal level. The problem with this is that it is difficult to argue that we have verbal access to our beliefs, values, attitudes and intentions but such verbal reports tell us nothing about when and how strongly they are connected.

The above research will attempt to develop a new thought elicitation taxonomy to capture relationships between well established constructs. Other advances are likely to be made by scholars interested in focusing on the nonverbal imaging and elaboration of subjects. Such activity may simply be underreported because current thought elicitation task instructions do not request subjects to report on such topic specific and tangential activity. It may be very easy for subjects to report and categorize non verbal imaging but very difficult for them to describe its content in detail.

TABLE 1

The Three-Phase Coding Scheme

Phase 1: Tripartite Theory Based Coding of Thoughts

- Product attribute description
- Belief statement about product
- Affective reaction to product
- Product intention
- Brand attribute description
- Belief statement about brand
- Affective reaction to brand
- Brand intention
- Advertisement attribute description
- Affective reaction to ad

Phase 2: Involvement/Centrality Theory Based Coding of Thoughts

- Personal past use of product
- Benefit is personalized
- Usage Consequence is personalized

Phase 3: Means-End Theory Based Coding of Thoughts

- Product-attribute link
- Brand-attribute link
- Product-benefit link
- Brand-benefit link
- Attribute-benefit link
- Product-attribute-benefit links
- Brand-attribute-benefit links
- Attribute-benefit-intention links
- Product-attribute-benefit-intention links
- Brand-attribute-benefit-intention links

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Introduction

In consumer research, it is known that people often respond differently to the same questions asked at different times. It is also known that different forms of the same question can elicit very different responses. It is also known that consumers often choose different products at different times even though the apparent economic (objective features) of the choice seem invariant. Earlier consumer research sought to explain these choice inconsistencies by suggesting that different purchase situations or contexts could lead to inconsistent purchase choices. However, Kahneman and Tversky (1979) have recently offered prospect theory illustrating psychological principles that underly the perceptions of decisions. These perceptions, together with an evaluation of probabilities and outcomes, produce preference shifts and reversals when the same choices are posed in different ways. Thus, it is clear that choices often depend on the way a problem is posed (framed) as much as the objective features of a problem.

An Overview of Prospect Theory

Over the past 20 years, consumer researchers have explored consumer choice behavior by applying theoretical frameworks from either psychology or economics. Kahneman and Tversky's prospect theory represents a unique contribution in that it blends expected utility theory with psychophysical influences on choice. A major distinction between expected utility theory (EUT) and prospect theory (PT) is that in PT values are assigned to gains and losses, and decision weights replace the probabilities of EUT (Corstjens and Gautschi 1983). Thus, the revised theory of choice replaces the utility function with a value function (Thaler 1985).

In PT, the psychophysics of value leads to risk aversion when a decision is framed in terms of gains, and to risk seeking when the decision is framed in terms of losses. Sure or certain events tend to be overweighted relative to events of moderate probability. Further, decision problems can be described in multiple ways, leading to different preferences contrary to the invariance criterion of rational choice (Kahneman and Tversky 1984). Finally, Thaler (1980, 1985) proposes that consumers code the outcomes of purchase situations into mental accounts. Recognizing that a consumer purchase is a mixed outcome in that the consumer gives up something (usually money) to acquire something (product), means that the typical purchase choice involves both gains and losses. Moreover, both Kahneman and Tversky (1984) and Thaler (1985) suggest that the acceptability of an offer can depend on whether the negative outcome (e.g., sacrifice of money) is framed as a cost or as an uncompensated loss.

Another key aspect of PT concerns the distinction between experience value and decision value (Kahneman and Tversky 1984). Experience value is the degree of pleasure or satisfaction versus pain or anguish in the actual experience of an outcome. Decision value is the contribution of the anticipated outcome to the overall attractiveness or aversiveness of an alternative offer. Experience, either past or anticipated, influences choice by serving as a reference point for evaluating current options. Further, as a consumer acquires experience or information, this point of comparison changes. Thus, an important research issue concerns how this adaptation level (Helson 1964), or aspiration level (Puto 1986) is determined or formed, and how such a reference point separates positive from negative outcomes.

Recent Research

Apart from these conceptual frameworks little formal consumer research has been done on the issues of framing and

reference points. In the past year, several efforts have applied prospect theory's concept of framing to consumer and buyer research. Levin, Johnson, Russo, and Deldin (1985) asked subjects to rate various choices of ground beef on the basis of price and percentage of lean (for half of the subjects) or percentages of fat (for the other half). The price and percentage lean condition produced significantly higher satisfaction ratings. Even though the price-quality choices were identical, framing one option in terms of percentage fat stressed the losses inherent in the choice (cost and health risk) rather than a mixed outcome (price and good taste).

Wiener, Gentry and Miller (1986) investigated preferences for insurance when offered in terms of assets (gains) versus as a loss. They found tentative support for the prediction that the asset frame would produce stronger likelihood for an insurance purchase. Puto (1986) investigated the impact of changing reference points on industrial buyers' choices. By varying and measuring buyers' purchase aspiration levels, he was able to establish a consistent relationship between their reference points and choices. Further, aspiration levels or decision reference points were influenced by expectations about the future trend of prices.

Session Objectives

Given the small number of recent attempts to address the implications of adapting prospect theory to consumer research, this session discussed the theory and its significance for consumer research. Such an adaptation offers considerable promise because it integrates economic reasoning with established concepts from cognitive psychology.

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COGNITIVE REFERENCE POINTS IN CONSUMER DECISION MAKING

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Abstract

Recent work in decision theory demonstrates the impact of reference points on consumers' decision making processes and outcomes. This paper suggests a series of conceptual and methodological issues that should be addressed by further research in this area.

Introduction

Some of the most exciting recent research in decision theory deals with the effect of perceptual processes on evaluation and choice. In particular, Kahneman and Tversky's (1979) prospect theory shows that the evaluation of outcomes is strongly dependent on a reference point. A reference point determines the position of choice outcomes on a value function, thereby determining their desirability. Most research on reference point effects on evaluation and choice has been done in the context of risky choice, where an alternative is presented as an array of outcomes with associated probabilities of occurrence. However, Thaler (1985) has also demonstrated that prospect theory's value function can explain consumer choice behavior that is contrary to traditional economic theory.

The purpose of this paper is to explore some implications of reference points for consumer decisions. We propose a series of conceptual and methodological issues that should be pursued in this area. The discussion of these issues incorporates the ideas and results of Thaler (1985) and others with liberal speculation about possible extensions. Our immediate objective is to stimulate thinking about the role of reference points in consumer choice, to help to create an agenda for research in the area. We contend that reference points deserve this attention because of their potential consequences for consumer evaluation and choice, information search, and the organization of consumer knowledge.

Types of Reference Points

Reference points have generally been defined as any stimulus which "other stimuli are seen in relation to" (Rosch 1975). This definition's simplicity is deceptive; it encompasses a variety of reference points that may differ in terms of how they're derived and what they represent to the consumer. For instance, one reference point may be the consumer's perception of what is typical in the marketplace, another may be an aspiration level for a purchase, and a third may be the alternative currently owned. The variety of possible reference points is reflected in the list of reference points for price shown in Table 1. This list was compiled from discussions of possible reference prices in the literature (cf. Della Bitta and Monroe 1973), and from personal interviews with students about reference prices.

Some implications of such a broad definition need to be explored. First, it should be noted that "a stimulus that other stimuli are seen in relation to" may be external as well as internal. This contrasts with alternative definitions, such as Thaler's (1985) definition of a reference price as the "expected or fair" price, which is an internal representation. In Table 1, "a particular price I've seen recently" may in some instance be the price of an alternative in the evoked set, to which other prices are compared during a choice process. The reference price need

TABLE 1
PROPOSED TYPES OF REFERENCE PRICES

ASPIRATION PRICES	The price I would like to pay The price I would consider a "good buy" The most I would ever pay A reasonable price
MARKET PRICES about	The average retail price A particular price I'd seen or heard
HISTORICAL PRICES	The average price I pay The last price I paid The price I usually pay

not be internalized as an expectation, aspiration or typical value. Second, some of the internalized reference prices in Table 1 are also incompatible with Thaler's definition. For example, the price I would like to pay, the most I would pay, or a good buy may all be distinct from a realistic expectation. Although a more restricted definition may be appropriate in a particular theory, it is important to recognize the existence of alternative reference points and account for their possible use as part of the theory's boundaries. We return to this point later in discussing transaction utility.

The list of distinct reference points in Table 1 is presented with some reservations. Consider the three categories into which they are grouped. Aspiration level reference points represent consciously established goals or targets for an attribute. Market reference points are based on the perceptions of attribute levels in the marketplace. Historical reference points represent a consumer's purchase experience, which may incorporate only a subgroup of market levels. These categories are not mutually exclusive, either empirically or conceptually. For example, in Table 1 the usual price you pay or the typical market price may also be your aspiration level for a particular purchase. The last price you paid may have been determined by a previous goal.

This recognition leads to a central conceptual question. Are the items listed in Table 1 themselves reference points for price or are they simply factors that together influence the reference price? In some sense, it seems that both are true. The last price paid may be retrieved by a consumer and used alone to evaluate current prices. However, an aspiration level reference point probably adapts to information such as the last price paid, shifts in typical market prices, specific prices that are currently salient, etc. One research priority should be to determine how consumers themselves conceptualize their reference points, if indeed they do, and to discover the factors that affect that representation.

There is an additional complication in that the reference points in Table 1 may not really exist as points, but rather as a range of values. For instance, two perceptually distinct levels may both be typical. An aspiration level may include several equally satisfactory values, e.g. an acceptable range of prices (Monroe 1984).

In such a case, the comparison of a stimulus to a referent entails a judgment about its inclusion within a range of values, rather than a comparison to a specific value. The "fair price" definition of reference price used in Thaler's theory of transaction utility also seems likely to encompass a range of prices.

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Despite the fuzziness of the categories and types of reference points proposed in Table 1, we suggest that the classification highlights some useful distinctions among alternative reference points, such as the information used in their formation, the importance of goals, and other factors that are discussed later. Additional reference points, or alternate groupings that create better theoretical or pragmatic classifications, may become apparent as more research is done.

Factors Influencing Reference Point Selection

Many of the reference points discussed above may be used at various times by a decision maker; the question arises as to what factors influence the use of one type of referent over another. A second issue pertains to influences of the level of the reference point; e.g. given that an aspiration level reference point is used, what determines how high or low that price is? Three areas of influence seem likely: dimensions of the stimulus and its context, the task, and individual differences.

Stimulus and Context Characteristics

First, the value that the stimulus possesses on the attribute being evaluated may influence its initial classification, thereby eliciting a particular reference point. This seems most likely to occur when there are distinct subgroups within a product class, which possess different reference points. For example, different quality/price lines of a product are common. When an attribute is evaluated that is diagnostic of membership in a quality line, the relevant classification is made and the appropriate reference point is selected. Thus a consumer looking at a pair of \$60 Vuarnet sunglasses may initially classify them as designer or high performance sunglasses due to the price or brand name, which elicits the reference price for that type of sunglasses. A \$7 pair of Foster Grants could elicit the much lower reference price for drugstore sunglasses. Not only the specific reference price but the type of reference price may be determined by the stimulus value. For instance, a price within the normal range for sunglasses may be compared to the typical price paid, whereas an extremely high price could elicit a comparison to an aspiration level, such as "the most I would ever pay".

Characteristics of the choice context should also influence reference point selection. The heterogeneity of the levels of a particular attribute should affect the decision maker's incentive to set goals for that attribute. Homogeneous offerings curtail the decision maker's ability to improve an outcome, therefore the use of aspiration levels may be less frequent. The general attractiveness of an alternative set with regard to an attribute may influence the level at which an aspiration reference point is set, with more attractive alternatives eliciting more ambitious goals.

Task Characteristics and Frames

Evaluation tasks, which call for an absolute judgment, may invoke internal standards as reference points more readily than choice tasks. Choice heuristics seem likely to involve the comparison of alternatives under consideration to each other with greater frequency, implying the use of external reference points. In addition, the choice objectives of optimizing versus satisficing could be influential, with optimization associated with higher goals, and therefore eliciting more favorable reference points.

The frame used to represent the purchase task has also been shown to elicit different reference points. (See Thaler (1985) for a complete discussion of the effects of these frames, or budgetary accounts.) A calculator being purchased as a gift might be framed as either a calculator purchase or as a gift purchase. When the reference points for these two classifications diverge, the different frames could lead to different choices. A price for a particular offering may be evaluated as unacceptably high for a calculator, but reasonable for the gift occasion (or vice-

versa). Another example would be framing a discretionary expenditure as a splurge or reward as opposed to an ordinary purchase within the relevant product category. Both splurges and gifts are interesting frames, because they cut across product categories, but intuitively seem likely to have distinctive reference points with respect to attributes such as price, style, quality, etc.

Individual Differences

The reference points in Table 1 differ in their degree of abstraction; different information and different amounts of processing are required for their formation. Reference points derived directly from a particular alternative (last one bought, one recently seen) are very concrete, require minimal specific information and no elaborate processing of that information. However, reference points involving typicality (typical market level, the typical attribute level I buy) generally require the acquisition and assessment of information about a distribution of attribute levels before the reference point is derived. Aspiration level reference points require that preferences be determined in order to form goals. Since the information required and the demands of its processing vary with the reference point used, individual differences such as the degree of involvement or interest in the product, knowledge of product attributes, and attribute importance may be influential in their selection. When involvement, knowledge, and attribute importance are low, no reference point may even be formed. High involvement and high attribute importance seem most likely to result in conscious goal setting, thus invoking an aspiration level. Greater knowledge of the attribute levels and their distribution in the market environment should be associated with reference points based on typical values.

The market environment itself may limit such knowledge in some cases. For example, prices of professional services (e.g. legal, medical) are usually not promoted. Therefore historical reference prices, based on personal experience rather than market information, should be used. Zeithaml and Graham (1983) found that students' reference prices for medical and legal services were generally quite inaccurate, and that for medical services little prepurchase price evaluation is done.

Evolution and Adaptation of Reference Points

Reference points are dynamic, and the process by which they are formed and changed deserves examination. Two kinds of change are possible: a change in the type of reference point used and a change in the specific value of the reference point. Consider first the reference point type. A novice buyer of a particular product should initially have little knowledge about the distribution of attribute levels in the market and some uncertainty about preferences for those levels. The use of reference points based on typicality or aspiration levels may therefore be limited. A concrete alternative should be an easier reference point to use: for instance a well known brand or the one that is first encountered. The type of reference point used may evolve as buyers pass through stages of increasing familiarity with the product. For example, a novice PC buyer may acquire information about the IBM PC first because it's the best known exemplar of the product category. Information about attributes of other personal computers is then compared to the levels possessed by an IBM pc. As familiarity with the product class increases and preferences are formed, reference points involving typicality and/or aspirations are possible.

Reference points can therefore serve somewhat different functions as they evolve. An initial reference point based on a single alternative may be used as a way of organizing information; i.e., acquiring a knowledge structure about the product class and alternative brands. Evaluation should play a larger role as knowledge develops, and preferences for attribute levels are formed.

Marketers also need to be concerned with the dynamics of both long term and short term changes in the value of the reference point. These changes have usually been modeled as an anchoring and adjustment process, with the initial reference point forming the anchor which is adjusted by new information. The nature of this adjustment process is uncertain, and probably varies situationally. Helson (1964) hypothesizes that an adaptation level is the weighted geometric mean of all previous stimuli. The characteristics of new information received by consumers, such as its importance, credibility, vividness, degree of discrepancy from the reference point, and accessibility should help to determine the weight it is given, hence determining the degree of adjustment.

Marketers sometimes attempt to simply present a new reference point for a consumer's evaluation, through direct comparisons to specific competitors or to the typical offering in the market. These tactics seem most likely to succeed with consumers whose previous reference point is based on little or uncertain information. Consumers are likely to perceive promotional information with some skepticism. Liefeld and Heslop (1985) gave respondents advertisements with both the sale and regular prices of a variety of products and asked them for estimates of the ordinary selling prices. Average estimates ranged up to 18 percent below the true ordinary selling price, indicating that the regular prices presented in the advertisements as reference points were not believed.

Reference Point Effects

Transaction Utility

In prospect theory, the reference point determines whether outcomes are characterized as gains or losses; a shift in reference point can alter the comparative value of outcomes and therefore alter choice. Thaler (1985) explains several instances of noneconomic consumer behavior through the application of prospect theory's value function. Thaler (1985) asserts that the total utility of a market exchange is composed of two elements: acquisition utility and transaction utility, whose determinants are defined as follows:

p_a = the price of alternative a

p_a^* = the reference price of alternative a
(the expected or fair price)

\bar{p}_a = the value equivalent of alternative a
(the sum of money which the individual would be indifferent to receiving as a gift instead of a)

Acquisition utility is a function (v) of the value equivalent of an alternative and its actual price: $v(\bar{p}_a, -p_a)$. Transaction utility is derived from comparing the price paid to the expected or fair price on the same value function: $v(-p_a, -p_a^*)$. Paying less than expected generally contributes the positive transaction utility of a bargain. The value of buying alternative a at price p_a is therefore the sum of its acquisition and transaction utilities:

$$v(\bar{p}_a, -p_a) + v(-p_a, -p_a^*)$$

Thaler (1985) has detailed instances in which different frames create different reference points, with subsequent effects on transaction utility and ultimately on willingness to buy or sell. One often quoted illustration of the effect of transaction utility is that of the hypothetical man on the beach, who respondents think will be willing to pay more for a bottle of his favorite brand of beer when it is purchased for him from a resort hotel than when it is purchased from a grocery. In this case the beers are identical, therefore the value equivalent of each beer is

the same ($\bar{p}_h = \bar{p}_g$). However, people expect to pay more for beer at a fancy hotel, so the reference price of the hotel beer is higher ($p_h^* > p_g^*$). Thus when $p_h = p_g$, the transaction utility of purchasing the hotel beer is greater than that of purchasing the grocery beer: $v(-p_h, -p_h) > v(-p_g, -p_g)$. The higher reservation price for the hotel beer is the result of this added transaction utility. Some implications of transaction utility are explored below.

Single Versus Multi-alternative Choices

The scenario given above demonstrates the role of transaction utility in the context of a buy-no buy decision for one alternative. Does transaction utility play an analogous role in a choice made among several alternatives? Consider the man on the beach whose friend offers to bring back his favorite brand of beer from either the grocery store or the hotel. Suppose that the prices of the two alternatives are known to be equal ($p_h = p_g$), and all additional costs of obtaining the beers are equivalent. The acquisition utility of the two beers is therefore equal. However the decision maker should not be indifferent between these two identical beers at the same price; the higher transaction utility for the hotel beer implies that it should be chosen over the grocery beer.

Suppose that you extend the example by increasing the price of the hotel beer. As p increases, both the acquisition utility ($v(p_h, -p_h)$) and the transaction utility ($v(-p_h, -p_h)$) of the hotel beer decrease. At some price ($p_h > p_g$) the total loss of value due to the increased price of the hotel beer should make the decision maker indifferent between it and the lower priced grocery beer. Until the hotel beer reaches this price it has higher value, and should be chosen even when its price exceeds that of the identical grocery beer.

The problem is that it doesn't seem intuitively right that someone will choose a higher priced alternative over an identical lower priced alternative, regardless of initial expectations about prices. Can the choice of the cheaper beer be reconciled with Thaler's (1985) transaction theory? One possibility is that the reference price in a transaction is not always the fair or expected price. In a multi-alternative choice, the salience of some competitive alternative, particularly a leading contender, may result in the use of its attribute levels as reference points; in the example above, $p_h^* = p_g$. Transaction utility in this case depends on the price of the purchase compared to the contender's price; the transaction utility for the hotel beer would be $v(-p_h, -p_g)$. This would imply that transaction utility may sometimes accrue from the particular set of alternatives in which a choice is embedded, as well as from an initial expectation about its price.

A second possible rationale for the choice of the cheaper beer is that when two alternatives with different expected prices are considered together in a choice, a reference point for a category that includes them both is elicited. In the example above, when presented with the choice between the hotel beer and the grocery beer, the reference price for beer - without a particular purchase location, or in its most common purchase location - may be used. Using a common reference point results in the cheaper beer having greater transaction utility.

The issue underlying all of these scenarios is whether two alternatives thrown together in a choice set are still evaluated with respect to their individual expected or fair prices. What variables would promote the use of their original reference prices instead of the price of a competing alternative, or a new, common reference price? One factor may be the degree of similarity between the two alternatives. With identical items (like the beers) the most natural choice heuristic may be a direct comparison of the two on their sole distinguishing characteristic: price. The more dissimilar the two are, the greater may be the tendency to segregate their evaluations, evaluating each one's price with respect to its fair or expected price.

When two alternatives are so distinct that they are categorized into two separate product subclasses, the use of a common reference point or a direct price comparison should seem less appropriate. Consider two choices: the first is between two brands of a high performance stereo component systems; one brand commands a slight price premium. The second choice is between a high performance and a low performance system. Although both choice sets involve two different reference prices, the alternatives in the first choice set are more directly comparable. It seems more likely that their prices will be seen in relation to each other or to a common reference price for high performance stereos. The disparity of the two offerings in the second choice may work against such a direct comparison, leading the decision maker to refer to the fair price for each.

A second potential factor in the use of a fair price to evaluate an alternative is how far the price of that alternative diverges from the fair price. The fair price may not be especially salient unless an offered price falls strikingly above or below it, signaling a bargain to pursue or an overcharge to avoid. This would be especially likely if the fair price is actually a range of prices.

A final factor may be the ambiguity of information with which the decision maker is working. Expectations about fair prices should be held with more confidence and used more often when the decision maker understands the product class attributes and how to evaluate them. The greater the ambiguity of the stimulus being evaluated, either from lack of information about it or from the decision maker's inability to assess it, the harder it should be to confidently establish a fair or expected price. One solution would be to evaluate attributes by inter-alternative comparisons, which require fewer absolute judgments. Another strategy would be to use the offering price as a diagnostic cue for quality, which means that the offered price is implicitly evaluated as fair. In this situation, increasing the price of an alternative actually increases the value equivalent of the product.

Multi-attribute Alternatives

In the transaction theory previously stated, the product is seen as a unidimensional entity, whose value equivalent is compared to its price. Marketers are concerned with the attributes that create that value equivalent. Are reference point effects important for attributes other than price? Reference points on other attributes are plausible; Table 2 shows a more general statement of the reference points proposed for price in Table 1. What role might such reference points play in evaluation and choice?

TABLE 2
PROPOSED TYPES OF REFERENCE POINTS

ASPIRATION LEVELS	The level I would like to buy The minimum acceptable level A satisfactory level
MARKET LEVELS about	The typical level found in the market A level I'd recently seen or heard about
HISTORICAL LEVELS	The typical level I buy The last level I bought

Let us assume that any attribute level better than its reference point is considered a gain, while any below the reference point is considered a loss. An alternative can therefore be represented as a set of gains and/or losses. These gains and losses can often be either segregated (presented separately: e.g. \$100 and \$50) or integrated (presented in merged form: e.g. \$150). Thaler (1985) proposes that the shape of the value function implies that the evaluation of an alternative is improved if losses are integrated with each other or with larger gains, and gains are segregated from each other and from greater losses. The sticking point in applying this principle to the

presentation of multiple attributes is that different attributes are generally expressed in different metrics, which limits the possibility of integration. Dollar losses or gains can be added; four-wheel drive and low mileage cannot be. It has also been suggested that the advisability of segregating or integrating mixed outcomes is affected by the order in which the outcomes are presented (see Ross and Simonson, this session). This would imply that the order in which (necessarily) segregated attributes of an alternative are presented would affect its ultimate evaluation.

Another important aspect of reference points for multiple attributes is their effect on the choice heuristics used. Siegel (1957) proposed that an examination of the utility function for a set of outcomes (in this case, an attribute's levels) would show that a decision maker's aspiration level is positioned as the upper bound of the part of the function with the steepest slope. (This proposition agrees with prospect theory's value function being steeper for losses than for gains.) Siegel (1957) characterized all outcomes below this aspiration level as unacceptable. Logically, it should be these unacceptable levels that are eliminated in noncompensatory cutoffs. Klein (1983) also presents some evidence that noncompensatory cutoffs are positioned at the point above the steepest slope of the utility function. Changes in the reference point may therefore change the location of noncompensatory cutoffs, which can affect the final choice.

Finally, Yates and Jagacinski (1979) have proposed that the general attractiveness of an alternative's attribute levels may create a reference for the evaluation of any one of those levels. For example, consider two alternatives: A has the worst level on all but one attribute (x); A has the best level on all but x. In their study, varying the value of x had more impact on the evaluation of A than it did on A. This might be explained in terms of prospect theory's steeper value function for losses than for gains. The other attributes of A create a high reference point for x, so that any value on x is perceived as either neutral or as a loss, while for A values of x are perceived as either neutral or as gains. It is an empirical question as to whether the less consistent and extreme attributes of most products in the marketplace create reference effects in the same way.

Sequential Decisions

Decisions involving whether or not to buy a single alternative and choices of one alternative from a set have been discussed. A third type of decision presents an interesting scenario for the observation of reference point effects: one in which alternatives are presented sequentially, with decisions made on one alternative before the next is available for consideration. Examples of these decisions may include house purchases, job decisions, or buying antique collector's items. While similar in many respects to a single alternative decision, sequential decisions accentuate some characteristics. The most striking of these is the uncertainty about the quality (or even existence) of future options, or the future availability of a current option. The reference point used for evaluation may determine the decision maker's willingness to forgo moderately good alternatives in order to achieve potentially greater gains; as in prospect theory, a more ambitious (i.e. more favorable) reference point should lead to greater risk seeking (i.e. longer search).

Another intriguing aspect of this type of sequential decision making is that the generally longer time frame permits the reference point to fully adapt to the levels of the alternatives being presented. The degree and direction of this adaptation should depend on several variables. The first is the content of previously presented alternatives, which should influence the decision maker's expectations about future choices by indicating the general availability of various attribute levels. Trends in the content of alternatives should also affect expectations; one would hypothesize that an improving sequence of alternatives will lead to more optimistic reference points

(and longer search) than will a deteriorating sequence. The decision maker's inferences about the causal mechanism underlying the trend would be a major factor moderating this effect.

Controlling the sequence of alternatives might successfully manipulate the reference point in a certain direction. Consider a realtor's strategy in showing houses to a new prospect with a relatively low (and invariably unrealistic) reference price for their prospective purchase. Presenting a series of houses in ascending order of price, which allows gradual adaptation to occur, may be more likely to result in adaptation to a higher reference price than if the order was descending or mixed.

Measurement of Reference Points

Studies on framing and reference points have seldom tried to directly measure naturally occurring reference points. In risky choice decisions, zero loss or gain creates a natural reference point for most decision makers. Outcomes can be translated about this reference point in order to study reference point effects (cf. Payne, Laughhunn and Crum 1980). Alternatively, goals can be assigned as reference points, as Payne, Laughhunn and Crum (1981) did. Puto (1986) and Puto, Patton and King (1985) tried a third approach by creating scenarios with several plausible reference points; decision makers identified the reference point they had used from a list of descriptions provided.

The same type of manipulations and measures are possible for studying reference points in consumer choice. For price, frames involving an original versus a discounted price, or an offered versus a manufacturer's suggested retail price are plausible (Liefeld and Heslop 1985; Monroe and Chapman, this session). However, marketers wishing to know what reference point the consumer ordinarily brings into the decision process needs to eventually focus on direct measurement. Consumers' awareness of reference points in decisions probably varies with its use in the decision process. Deliberate comparisons should be more memorable while the use of reference points in an attribute evaluation may be relatively automatic, and less accurately reported. The feasibility of direct measurement needs to be resolved empirically.

Summary

This paper evaluates possible reference point effects on riskless choice outcomes and processes. While reference points have already been shown to have dramatic effects on evaluation and choice (Thaler 1985), more work is needed to assess the strength of their impact within various choice contexts. In particular, one research priority should be to assess reference point effects when a choice is made from a multi-alternative set, a context that may be more typical of consumer behavior than that of a buy-no buy decision for one alternative. It is proposed that a reference point used in such a situation may not always be some previously evolved standard that is retained throughout the choice process. Adaptation of the reference point during the choice process, and the use of a reference point supplied by the choice set itself deserve further investigation.

It has also been shown that the reference point for price can represent a variety of concepts to the consumer. The role of knowledge about the attribute appears to play a significant role in this representation. More powerful tests of the effects of the individual and market characteristics discussed here are needed. Decision makers who vary in the basis for their reference points may also vary in their susceptibility to manipulation of that reference point by marketers. The question of how easy reference points are to manipulate deserves some attention. Changing a reference point based on a long process of assimilating information and forming goals should be a non-trivial proposition. Understanding what the reference point is, and how it affects the evaluation of your offering, may be the highest priority for a marketer.

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Do Consumers' Reference Points Affect Their Buying Decisions?

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Abstract

This paper examines the applicability of prospect theory's reference point hypothesis to the consumer decision making process. We present a theoretical basis for reference point formation, and we report the results of a pilot study which tests this concept. In general, the results support the hypothesized relationship between the reference point and choice, and an individual difference factor, self esteem, was found to affect reference point formation.

Introduction

Researchers in a variety of academic and applied fields have long been interested in studying consumer choice, and the approaches used for studying choice phenomena reflect the varied backgrounds and interests the researchers bring to the task. Thus, for example, people's choices have been studied when they cast their vote for a political candidate, when they utilize a particular mode of transportation, and when they purchase a product or patronize a particular store. All of these choices have a common thread in that an individual decision maker considers two or more alternatives and their related outcomes, evaluates these alternatives along dimensions important to him or her, and selects the alternative which rates the highest on whatever criteria s/he wishes to use.

In this paper, we examine the applicability of prospect theory (Kahneman and Tversky 1979; 1982; 1984; Tversky and Kahneman 1981), a theory of individual choice under conditions of uncertainty, to consumer choice situations. Moreover, within the general scheme of prospect theory, we concentrate on exploring the foundations of the decision maker's reference point, which is hypothesized to determine the decision frame and, ultimately, the choice itself (Kahneman and Tversky 1979; Puto 1986). While we utilize only one form of consumer choice in this study--choosing between two retail sites--we propose that the framework for this investigation is readily adaptable to a variety of decision situations. In the remainder of this paper, we (1) briefly review prospect theory, especially with regard to our current knowledge of reference point formation, (2) present a series of research hypotheses derived from the literature, and (3) describe the results of a pilot study designed to explore the hypothesized origins of the reference point. The paper concludes with a summary of what we have learned and the resultant implications for future research.

Theoretical Background

In prospect theory, Kahneman and Tversky (1979) propose that decision makers (1) evaluate decision alternatives by expressing their outcomes as either gains or losses compared with a specific reference point and (2) tend to be risk averse for choices involving gains and risk taking for choices involving losses. Prospect theory is a descriptive extension of expected utility theory, a theoretical framework long used by economists and decision scientists both to describe how individuals make decisions and to prescribe how they should make decisions. Prospect theory essentially addresses the descriptive shortcomings of expected utility theory, which are numerous and widely documented in the decision research literature (Schoemaker 1982). Issues relating to the normative (i.e., prescriptive) aspects of expected utility theory warrant separate treatment, and they are not discussed here (cf. Lopes 1983).

Central to prospect theory is the proposition that the choice process has two distinct stages-- an editing stage

and an evaluation stage. In the editing stage, the decision maker restructures, or frames, the decision problem into a more simplified form, such as a choice among simple prospects (i.e., gambles of the form: receive outcome "x" with probability "p"; else receive outcome "y" with probability "1-p"). A key aspect of this editing stage is that the prospects are derived on the basis of comparing each outcome with its deviation from some reference point, which exists in the mind of the decision maker. The reference point serves as the zero point on this scale of comparison, and each outcome then is seen as a gain or a loss compared to that reference point. The evaluation stage then posits that the decision maker assigns a value to each of the edited prospects and chooses the one with the highest value. This evaluation stage is governed by two functions: (1) a value function, which is hypothesized to be centered on the reference point, is concave for gains and convex for losses, and is steeper for losses than for gains; and (2) a probability weighting function, in which objective probabilities are modified by decision weights and thus do not necessarily adhere to the strict rules of mathematical probability theory, e.g., they do not have to sum to one (Kahneman and Tversky 1979). Moreover, small probabilities are overweighted, and large probabilities are underweighted. The hypothesized form of the value function suggests that individuals tend to make choices which are risk averse for gains and risk taking for losses. Gains and losses, however, are determined by the reference point, and currently very little is known about how reference points come into existence. If reference points play a similar role in framing consumers' judgments and decisions, then it is important for consumer researchers to know how they are developed. We turn now to a brief theoretical introduction to reference point formation.

Reference Points and Decision Frames

The original presentation of prospect theory is mute with respect to the formation of the reference point. This was not a problem during the early theoretical development because the original research in prospect theory centered on decision problems which contained explicit, unequivocal reference points. In later work, Tversky and Kahneman (1981) speculated that an individual's current wealth is a likely reference point in decisions involving monetary outcomes. Fischhoff's (1983) seminal paper on reference points raised several issues, but he was unsuccessful in relating experimental subjects' choices to their reference points. Recently, Puto (1986) proposed a conceptual framework for reference point formation, which he then demonstrated in the context of an industrial buying decision. The operationalizations Puto used in testing his framework are necessarily specific to industrial buyers; however, the conceptual framework is sufficiently general to extend to consumer buying situations. The following discussion is a brief restatement of Puto's framework. The reference point formation process is an iterative one in which the consumer first establishes an initial reference point (e.g., a target value on a key dimension, such as price) which is then continuously modified by environmental factors, such as subsequently acquired information about the choice, up to the time of the decision (Puto 1986). At the time of the decision, the decision maker evaluates the alternatives based on the current (i.e., the final) reference point and renders his/her choice. The reference point determines the decision frame which, in turn, governs the choice. Thus, a reference point which permits the outcomes to be framed as gains will tend to promote risk averse choice behavior, and a reference point which permits the outcomes to be framed as losses will tend to promote risk

taking choice behavior. Decision frames which produce gains are termed positive frames, and decision frames which produce losses are termed negative frames. In the next section, we hypothesize several factors which affect the formation of the initial reference point and the final reference point.

Research Hypotheses

We begin by hypothesizing a relationship between the final reference point and choice matching that proposed in prospect theory. We then develop hypotheses regarding factors which affect the initial reference point, and we conclude with an exploratory issue regarding the effect of the stated probability on the reference point and choice. First, we turn to the "prospect theory" hypothesis. Prior research in prospect theory has reported that people tend to be risk averse for gains (i.e., they prefer a sure gain to a probabilistic outcome having equal or greater expected value) and risk taking for losses (i.e., they prefer a probabilistic outcome to a sure loss of equal expected value). If consumers frame buying decisions in a similar manner, then their choices should be similarly affected. Stated in research form, hypothesis one is as follows:

H1: Consumers whose reference points permit the choice to be framed as a gain will tend to exhibit risk averse choice behavior, and consumers whose reference points permit the choice to be framed as a loss will tend to exhibit risk taking choice behavior.

As proposed by Puto (1986), the initial reference point derives from the individual characteristics of the decision maker (e.g., personality traits and the decision maker's perception of the choice environment), combined with whatever preliminary information that exists regarding the options to be evaluated. Consumer and marketing researchers have displayed an ongoing interest in relating personality traits to consumer behavior, but these efforts have at best met with mixed results (Kassarjian 1971). While several reasons have been advanced for this lack of correspondence between personality traits and brand choice, one plausible explanation is that the effects are indirect and thus may either be overwhelmed by stronger effects or measured at the wrong stage of the decision process.

If, for example, the reference point influences choice as hypothesized in prospect theory, then factors which influence the reference point are likely not to emerge as direct effects on choice (Puto 1986). One factor which may affect the reference point is the individual's self-esteem. The initial reference point is a target or preliminary goal, and Locke et al. (1981) propose that self-esteem affects goal setting in a predictable manner. Specifically, individuals with high self-esteem should be more likely to set challenging targets than those with low self-esteem. This suggests the following research hypothesis:

H2: People with high self-esteem will tend to form challenging initial reference points; people with low self-esteem will tend to form easily attainable initial reference points.

Another factor which may affect reference point formation is the person's attitude toward risk. Prospect theory essentially posits that, regardless of an individual's inherent risk taking propensities, the decision frame (as determined by the reference point) is the major determinant of risk taking behavior. Work by Huber and Puto (1985) suggests that the direction of causality is open to question. Huber and Puto created an informal risk attitude scale in which individuals gave their preference for several gambles alternatively framed by the experimenter as either gains or losses. Subjects who chose the "sure thing" alternative greater than 80% of the time were classified as "globally risk averse", and

subjects who chose the risky alternative greater than 80% of the time were classified as "globally risk seeking". Subjects who were risk averse for gains and risk taking for losses were classified as conforming to prospect theory, and subjects who exhibited the opposite pattern, e.g., risk averse for losses and risk taking for gains, were classified as anomalous. The results showed that while the modal group chose as predicted by prospect theory, there were significant numbers of subjects whose choices did not vary with the decision frame. This leads to the speculation that inherent attitudes toward risk may lead people to form reference points consistent with their risk attitude. In research form, this hypothesis is as follows:

H3: Individuals who are globally risk averse will tend to form initial reference points which are less challenging than those formed by individuals who are globally risk taking.

One generally accepted facet of consumer behavior is that consumers operate in an informationally rich environment. They are exposed to large amounts of product related information, which they may or may not process (Bettman 1979), but they do not function in an informational vacuum. At some stage early in the decision making process, consumers begin to attend to preliminary information regarding the choice they may eventually make, and we propose that this preliminary information contributes to the formation of the initial reference point. Some evidence for this is provided in Puto (1986) in which industrial buyers were given information suggesting that price trends for a given commodity were either increasing or decreasing. Initial reference points for these experimental subjects coincided with the trend they were given. Thus, for example, prior published prices, such as the manufacturer's suggested retail price or advertised sale prices, will likely form the basis of the initial reference point for consumers (provided, of course, that price is a key dimension in the choice). This hypothesis is given in research form as follows:

H4: Preliminary information in the form of published prices will affect the formation of consumers' initial reference points such that relatively high published prices will produce correspondingly high initial reference points, and relatively low published prices will produce correspondingly low initial reference points.

We turn now to the last research hypothesis, which relates the initial reference point to the final reference point. Puto's (1986) conceptual framework posits that the initial reference point can be modified by environmental factors up to the time of the decision. We do not specifically investigate these environmental factors in this research, and in their absence, we hypothesize a relatively close mapping of the initial reference point onto the final reference point. Thus, we posit hypothesis five as follows:

H5: When there are no environmental factors to intervene, the initial reference point determines the final reference point.

Finally, most research on risky choice includes, by definition, an explicit statement of the probabilities associated with each outcome. There is, however, research which suggests that individuals do not treat probabilities with the same rigor as mathematicians and decision scientists (Bar-Hillel 1973), and it is reasonable to speculate that consumers may not be accustomed to dealing with or using explicit probabilities during normal buying situations. Thus, while uncertainties may exist in these situations, it is not clear how consumers use these uncertainties in evaluating alternative choice outcomes. We begin to explore this issue by examining the effects of two forms of phrasing the uncertainty--as a 50-50 probability and

as "a chance"--on consumers' reference points and choices. In the following sections, we report the results of a pilot study which examines the five research hypotheses and the exploratory probability issue.

A Pilot Study

The basic design is a 2 (typical price) by 2 (probability) between subjects factorial, with the individual characteristics of self-esteem and risk attitude treated as measured covariates. The four cells in the design matrix are: (1) high typical price, 50-50 probability; (2) high typical price, "a chance"; (3) low typical price, 50-50 probability; and (4) low typical price, "a chance". The self-esteem and risk attitude covariates were measured using a separate questionnaire administered approximately one week prior to the choice task.

Stimuli

The choice task was presented in the form of a hypothetical buying scenario in which subjects were asked to choose between two alternative retail sites when purchasing a video cassette recorder (VCR). The basic format for each scenario was as follows: Subjects were informed that they definitely had to purchase a VCR that day. They were told that the manufacturer's suggested retail price was \$500 (which remained constant across all four scenarios), and they were told that they had remembered seeing the same model VCR priced at \$400 (\$350) but could not recall where. A chain store next to their workplace had the unit they wanted, and it was priced at \$375. A shopping center directly on their route home from work had two competing chain stores that carried the same VCR; one was priced at \$350 and the other at \$400. The store with the low price had only one unit left in stock, and they could not hold it until the subject arrived to purchase it. There was a (50-50) chance the unit would be sold when they arrived. If that happened, they could not return to the first store and would thus have to buy the one at the higher priced store. Their choice, then, was always between taking the "sure" price of \$375 at the store near work or going to the shopping center and taking a risk that the low priced store would be sold out when they arrived. The frame was manipulated by the typical price. The \$350 typical price should make the \$375 price at the store near work a sure loss of \$25, and the \$400 typical price should turn it into a sure gain of \$25.

The subjects were adult males enrolled in continuing education courses at a Michigan community college. Participation was voluntary, and subjects received no compensation for the study. The experimental materials consisted of two survey booklets, the first one containing the 20-item self-esteem scale and the 6-item risk attitude scale, the second one (administered one week later) containing the hypothetical purchase scenario and the dependent measures. Completion of each booklet was self-paced.

Measures

Measures were taken of (1) the initial reference point, (2) the final reference point, (3) the subject's assessment of the probability associated with the risky outcome, (4) the subject's self-esteem, (5) the subject's risk attitude, and (6) the subject's choice between the two possible retail sites.

The initial reference point was measured by asking subjects to indicate a target price they planned to pay for the VCR. The only information available was the manufacturer's suggested retail price and the price "they remembered seeing" during a previous search effort (either \$350 or \$400). If prior information has an effect on the initial reference point, it should be manifested in a downward adjustment of the manufacturer's suggested retail price, and larger adjustments should be

observed for the \$350 than for the \$400 recently observed price.

The final reference point was measured following Puto (1986) in which subjects were asked to select from a list of possible reference points the one which came the closest to the basis of comparison they used in evaluating each alternative. Each scenario contained four possible final reference points as follows: (1) \$350 (one of the risky outcomes); (2) \$375 (the sure thing); (3) \$400 (the other risky outcome); and \$500 (the manufacturer's suggested retail price. Note that the price the subject "remembered seeing" was one of the experimental manipulations--\$350 if a negative (loss) frame was being induced and \$400 if a positive (gain) frame was being induced--and thus coincided with either final reference point (1) or (3). The probability measure was an eleven-point scale (0-10), anchored by "extremely unlikely" and "extremely likely", on which subjects indicated the probability they actually used in determining whether or not the uncertain event would take place (Wyer 1974). Choice was measured categorically; either subjects chose the sure thing, or they chose the risky option.

Self-esteem was measured using Eagly's (1967) 20-item scale. Ten items were designed to reveal high self-esteem, and ten items were designed to reveal low self-esteem. Subjects responded by indicating their degree of agreement or disagreement with each item on a seven-point scale anchored by terms such as "always" and "never". The ten low self-esteem items were reverse scored, and the twenty items were summed to produce an overall measure of self-esteem. Risk attitudes were measured using a variant of the Huber and Puto (1985) risk attitude scale. Subjects were given 6 pairs of gambles (3 with positive frames and 3 with negative frames), each involving a choice between a sure outcome and a probabilistic outcome, and were asked to choose the one from each pair they would prefer to play. Subjects who chose the sure outcome five out of six times were designated globally risk averse; subjects who chose the probabilistic outcome five out of six times were designated globally risk seeking; subjects who chose the sure outcome for gains and the risky outcome for losses were designated as complying with prospect theory; and subjects who did not fall into these categories were designated anomalous.

Results

We begin the results by examining the prospect theory hypothesis (H1), which posits that high reference points will produce positive decision frames (and generate risk averse choices) and that low reference points will produce negative decision frames (and generate risk taking choices). After examining the choice problem, subjects read a brief description of each reference point and indicated the one which best described the way they framed the decision. Table 1 shows the percentages of choices allocated between the sure thing and the risky alternative for each final reference point. The significance level for each term reported in Table 1 is based on the difference in chi-square between a "full" model containing all of the reference point terms and a "reduced" model omitting the term being tested. This difference is distributed as chi-square with one degree of freedom (Harrell 1986). With the exception of FRP3 (\$400), the results are in the hypothesized direction and at least marginally significant. For FRP3, the \$400 final reference point should result in a positive frame and thus produce a higher proportion of risk averse choices, which did not occur. Within the limited range of the pilot study, we do find moderate support for H1.

TABLE 1

RELATIONSHIP BETWEEN FINAL REFERENCE POINT AND CHOICE

Reference Point	Percent Choosing		P-Value ^{a,b}
	Sure Thing	Risky Choice	
FRP1 (\$350) (N=8)	25% ^c (2)	75% (6)	.01
FRP2 (\$375) (N=12)	58% ^c (7)	42% (5)	.10
FRP3 (\$400) (N=10)	40% (4)	60% (6)	.05
FRP4 (\$500) (N=4)	100% ^c (4)	0% (0)	.01

^aLikelihood ratio test of significance for overall model: chi-square = 8.37 with 2 d.f., $P < .05$

^bSignificance levels for each term were computed using the difference in L.R. chi-squares based on logistic regressions containing the full model versus a nested model omitting the term being tested (Harrell 1986)

^cResults are in the hypothesized direction

Research hypotheses H2, H3, and H4 all posit factors affecting the initial reference point, and they are examined using an analysis of covariance in which price (H4) and risk attitude (H3) are treated as experimental conditions and self-esteem (H2) is a covariate. (Note that risk attitude is technically a covariate, but since it was measured as a categorical variable, it was analyzed statistically as a treatment variable in an unbalanced design.) Detailed examinations of each hypothesis are given in order below.

Hypothesis two predicted that individuals high in self-esteem would tend to form more challenging initial reference points than those low in self-esteem. Eagly's (1967) 20-item self-esteem scale consists of ten items designed to reveal high self-esteem and ten items designed to reveal low self-esteem. The low self-esteem items were reverse scored and then summed with the high self-esteem items to produce an overall measure of self-esteem (Cronbach's alpha = .895). The analysis of covariance revealed no empirical support for H2 ($F_{1,31} = 1.37$, $P < .26$).

Hypothesis three predicted that globally risk averse consumers would have higher initial reference points (consistent with positive decision frames) and globally risk seeking consumers would have lower initial reference points (consistent with negative decision frames). Although there was a slight difference in the hypothesized direction for the initial reference point means (\$395 for globally risk averse consumers versus \$386 for globally risk seeking consumers), this difference did not begin to approach significance ($F_{2,31} = .32$, $P < .90$). Thus, there is no empirical support for H3.

Hypothesis four posited that high published prices (e.g., \$400) would produce higher initial reference points than low published prices (e.g., \$350). The results reveal absolutely no effect for the price manipulation ($F_{1,31} = .01$, $P < .95$), and in fact there is a slight (nonsignificant) difference in the opposite direction (\$379 versus \$382). This suggests that the subjects paid little or no attention to the attempted manipulation and results in no empirical support for H4.

Given the absence of hypothesized effects for H2, H3, and H4, an exploratory analysis was performed on the data to determine what, if anything, might be affecting the initial reference point. A scatterplot of the initial reference point data revealed that individuals with the highest levels of self-esteem formed initial reference

points which were slightly less challenging than those formed by individuals with medium levels of self-esteem, suggesting that a quadratic term be added to the model. A model containing a quadratic term for self-esteem was estimated, both with and without the price and risk attitude treatment variables. There were no significant effects for the two treatment variables; so the model reported in Table 2 contains the results of an ordinary least squares regression of the initial reference point on self-esteem and self-esteem squared. Although this is a post hoc analysis, it does indicate that self-esteem did play a role in influencing the initial reference points for these subjects. The low R^2 (.22), however, suggests that this effect is modest in size.

TABLE 2

POST HOC ANALYSIS OF THE EFFECT OF SELF-ESTEEM ON THE INITIAL REFERENCE POINT

Dependent variable = Initial Reference Point

$R^2 = .22$ Model $F = 4.25$ (d.f. = 2,30) $P = .0237$

Variable	Coefficient	T	P-Value
Intercept	1032.21	4.37	.0001
Self-Esteem	-12.66	-2.65	.0127
Quadratic ^a	0.06	2.50	.0179

^aSelf-esteem squared

Hypothesis five posited that the initial reference point was a major factor in determining the final reference point. A multinomial logistic regression using the final reference point as a four-level categorical dependent variable and the initial reference point as a continuous predictor variable failed to produce a significant effect (chi-square = 1.55 with 1 d.f., $P < .22$). A frequency distribution of the initial reference point data revealed a series of clusters approximating discrete points along the continuum from \$300 to \$500. Based on this, the raw data were categorized into four levels of \$350, \$375, \$400, and \$500, converted into three effects coded (1,-1) dummy variables, and used as predictors in a multinomial logit regression. The results provide some measure of empirical support for H5 (model chi-square = 7.84 with 3 d.f., $P < .05$).

With regard to the exploratory manipulation of a 50-50 probability versus "a chance", the experiment produced no significant results. The probability manipulation occurred after the measurement of the initial reference point and before the measurement of the final reference point. Thus, it was possible to test for an effect of the probability format on the final reference point and on choice. Logistic regressions were computed in which the probability format was a dummy coded treatment variable, and either the final reference point or choice was the dependent variable, and no interpretable results were obtained. This, in turn, raised questions regarding the probability manipulation, which we investigate next.

Wyer's (1974) eleven-point probability measure was collected at the end of the experiment for use as a manipulation check. Subjects were asked to report on a 0 to 10 scale the number which best corresponded to the likelihood that the undesirable outcome in the risky option would occur (i.e., the likelihood that the low priced store would be sold out). This measure was then used as the dependent variable in an analysis of variance to determine whether the manner of presenting the probabilities had an effect on subjects' perceptions of the decision probabilities. No effects were observed. There does not appear to be any identifiable relationship between the probabilities reportedly used by the subjects and either the final reference point, choice, or the probabilities stated in the experiment. This finding prompted one final analysis, which is reported below.

Since the dollar amounts of the various outcomes were known and the subjects provided a measure of the probabilities they claimed to have used, it is possible to compute an expected value for each outcome. This expected value can then be compared with the final reference point to determine which, in this instance, is the better predictor of choice. A logistic regression was computed using both factors (expected value and final reference point) as predictors of choice. Then a second logistic regression was computed using only expected value as a predictor variable. The difference in chi-square between the two models represents the statistical significance of the final reference point term. Chi-square for the "full" model is 6.92 (d.f. = 4), and chi-square for the expected value only model is 0.51 (d.f. = 1). Therefore, the difference in chi-square is 6.41 (d.f. = 3, $P < .08$), and the final reference point is a better predictor of choice.

Discussion

From the standpoint of using prospect theory to understand consumers' judgment and choice processes, these results are mixed. The empirical support for hypothesis one suggests that the final reference point is indeed a reasonable predictor of choice. Also, since the final reference point is essentially the result of a consumer judgment, it provides both a measure and another approach to exploring consumer judgment processes which, when combined with process tracing methods such as verbal protocols and information monitoring devices, may yield new insight into how such judgments are made. Moreover, the finding that the initial reference point, at least in the absence of effective manipulation, is affected by the individual's self-esteem represents an interesting link between individual differences and choice. It supports the idea that such factors may affect intermediate stages in the decision making process and thus only indirectly affect choice.

On the negative side, the manipulation we used was not successful in affecting either consumers' initial or final reference points, suggesting that this task is not as easy as it might appear. In this instance, it appears that the manufacturer's suggested retail price functions as an upper bound on the initial reference point for consumers, but factors affecting the lower limit remain to be determined. The results of the exploratory probability issue are also surprising. It seems that, in complex narratives, individuals assess their own probabilities, regardless of whether they are told the probability is "a chance" or "50-50". This finding suggests that Thaler's (1985) deterministic approach in applying prospect theory to consumer choice may be the appropriate route to follow. At this point we can only say that additional research into consumers' abilities to deal with probabilistic descriptions of uncertainty is warranted.

Conclusion

We began this paper by asking if consumers' reference points affected their choices, and the results suggest that they do. Furthermore, we report empirical support for an individual difference variable, self-esteem, indirectly affecting choice in a predictable manner. We were unsuccessful, however, in our efforts to experimentally manipulate consumers' reference points, and thus we did not learn as much about the decision framing process as we had hoped to learn. While single study, small sample results must be treated with caution, we are nonetheless optimistic that future research into the decision framing process is warranted and holds much potential for adding to our basic knowledge of consumer judgment and choice.

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FRAMING EFFECTS ON BUYERS' SUBJECTIVE PRODUCT EVALUATIONS

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Abstract

Since Scitovszky (1945) suggested that buyers use price not only as an index of sacrifice, but also as an index of product quality, many researchers have investigated this proposed price-perceived quality relationship. Although the research results tend to support a positive price-perceived quality relationship, it has also been shown that brand name and store name interact with price to enhance perceptions of quality, as well as independently influencing perceptions of product quality. However, one type of extrinsic cue that has not been investigated is the effect of a price promotion on buyers' product evaluations.

Thaler (1985) has suggested that whether buyers perceive the product offer as a "deal" affects subjective product evaluations. Promotional cues such as forms of discounts (coupons, rebates, regular price/sale price) may be perceived by buyers as offering a deal due to the use of reference prices to promote these forms of discounts. In this context, a reference price is a higher comparison price mentioned in the offer to the consumer along with the actual selling price of the product. Thus, sellers who present both the offered (actual) price and a higher comparative price are attempting to provide a reference for the consumer so that there will be a perceived deal. This paper extends the price-perceived quality conceptualization proposed by Monroe and Krishnan (1985), to include the framing effects of price promotions on buyers' product evaluations.

Price and Perceived Value

The purpose of this paper is to combine two streams of research on the influence of price on buyers' evaluations of purchase offers. Research on the price-perceived quality relationship has been criticized as ignoring differences between consumer choice or preference and perceived value (Monroe and Krishnan 1985). That is, previous research has used either consumer preferences or actual quality evaluations as dependent variables to assess whether consumers use price as an indicator of quality. Moreover, the research using preference as a dependent measure, implicitly, has ignored the traditional economic argument that price serves as an indicator of cost or sacrifice to the buyer.

It would be expected that consumers' preferences or choices would depend on how they evaluate the quality or benefits to be received from a product relative to the cost or sacrifice inherent in the price. Thus, Monroe (1979) has argued that buyers' perceptions of value represent a trade-off between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price:

$$\text{Perceived Value} = (\text{Perceived Benefits})/(\text{Perceived Sacrifice}),$$

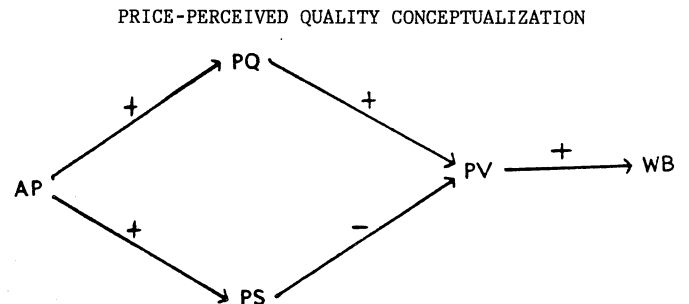
where perceived benefits are a f(perceived quality) and perceived quality is a positive function of price; perceived sacrifice is a positive function of price.

Keon (1980) offered a similar conceptualization, except he used the term bargain value.

Monroe and Dodds (1985) argued that perceptions of value were directly related to preferences or choice; that is, the larger a buyer's perception of value, the more likely would the buyer express a willingness to buy or preference for the product. Thus, they offered the model shown in Figure 1.

The conceptual model defines the role of price on buyers' perceptions of product quality, sacrifice, value, and willingness to buy. The model suggests that buyers use price as an index of perceived product quality as well as an index of the perceived sacrifice that is made when purchasing a product. Perceived value represents a trade-off between buyers' perceptions of quality and sacrifice and is positive when perceptions of quality are greater than the perceptions of sacrifice. At the same time, the increase in price will result in greater perceived sacrifice. Thus, the conceptualization posits a positive relationship between price and perceived quality and price and perceived sacrifice. Willingness to buy is positively related to perceived value. A recent test of this model has confirmed the basic hypothesized relationship (Rao 1986).

FIGURE 1



Where

- AP is Actual Price
- PQ is Perceived Quality
- PS is Perceived Sacrifice
- PV is Perceived Value
- WB is Willingness to Buy

Transaction Utility Theory

As suggested above, it would be expected that consumers' preferences or choices would depend on how they evaluate the quality or benefits to be received from a product relative to the cost or sacrifice inherent in the price. Thus, it has been suggested that buyers' perceptions of value represent a trade-off between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price.

Thaler (1985) draws upon Kahneman and Tversky's prospect theory (1979) to develop a model of consumer choice blending economic reasoning with principles of psychophysics and cognitive psychology. Replacing the utility function of economics with prospect theory's value function the model is developed using three key propositions:

1. The value function $v(\cdot)$ is defined over perceived gains and losses relative to a reference point. This proposition incorporates the psychophysical principle that people respond to relative differences rather than absolute levels. The use of a reference point permits framing to be incorporated in the model.
2. The value function is assumed to be concave for gains and convex for losses.
3. The loss function is steeper than the gain function. That is, people are more sensitive to the prospect of a loss than to the prospect of a gain.

A purchase or transaction is defined as a mixed outcome in that the buyer gains a product but loses the money paid for the product. Of concern in this theory is how buyers code or evaluate this mixed outcome. Thaler proposes that buyers evaluate a purchase opportunity by first judging the value of the offer and then deciding whether to make the purchase. This proposition is identical to the Monroe and Dodds (1985) model introduced above.

Also, as above, Thaler's model depends on the role that price plays in the evaluation process. However, three price concepts are used: (1) the actual price of the product, p , (2) the maximum acceptable price for the product, p_{max} and (3) a reference price, p_r . The reference price may be an expected price to pay, the last price paid, the "normal" market price (Monroe 1973).

The acquisition value of the product is the perceived benefits inherent in the product compared to the outlay. The perceived benefits (or worth) of the product is equivalent to the disutility of paying the maximum acceptable price. Thus, perceived benefit is equivalent to p_{max} and acquisition value is $(p_{max} - p)$, which is conceptually equivalent to perceived value in the original model.

To incorporate the notion of reference price, the concept of transaction value is used. Transaction value is the perceived merits of the offer and is defined as $(p - p_r)$. Thus, transaction value is positive if the actual price is less than the reference price, and negative if the actual price is more than the reference price. Therefore,

$$\text{perceived value} = \text{acquisition value} + \text{transaction value},$$

or,

$$pv = v(p_{max} - p) + v(p - p_r).$$

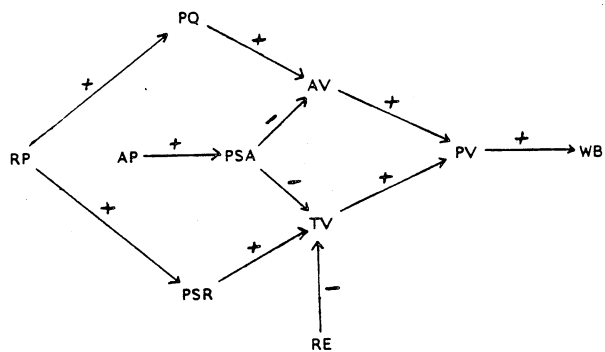
As above, willingness to buy is positively related to perceived value.

Enhancing Transaction Value

Formally including a reference price in a purchase offer provides an opportunity for the seller to frame the buyers' purchase decision problem. The use of comparative price advertising or point-of-purchase tags to communicate the usual or regular price and the lower asking price is an attempt to provide buyers with a price frame of reference, and in the spirit of transaction utility theory to augment buyers' perceptions of value. Another way to communicate the transaction value is to offer coupons or rebates if a purchase is made. However, both coupons and rebates, potentially, will have some perceived negative utility associated with the procedures of qualifying for the price reduction, and, in the case of mail-in rebates, the wait for the actual monetary rebate. Figure 2 shows how the concepts of acquisition value and transaction value can be used to extend the original price-perceived quality model.

The concepts of acquisition value and transaction value are directly related to the use of discounts in the marketplace. First, examine the situation of a simple price reduction, e.g., the price of a product is reduced from \$30 to \$25 with no reference being made to the previous price. The consumer will make a tradeoff between the perceptions of quality and sacrifice derived from the new \$25 price and arrive at a perception of value for the product as proposed by the original price-perceived quality conceptualization. This perception of product value may also be called acquisition value. Since there is no "deal" offered in the simple price reduction scenario, there will be no transaction value associated with the offer unless the buyer is aware of the price reduction; therefore, the total utility or value perceived by the consumer includes only the acquisition value. It should be noted this assumes that the consumer does not use an internal reference price for comparison.

THE EXTENDED CONCEPTUALIZATION



Where:

- AP is Actual Price
- PQ is Perceived Quality
- PSR is Perceived Sacrifice Regular
- AV is Acquisition Value
- PSA is Perceived Sacrifice Actual
- PV is Perceived Value
- WB is Willingness to Buy
- RP is Reference Price
- RE is Redemption Effort
- TV is Transaction Value

Second, take the situation where price is reduced and presented with a reference price to the consumer, e.g., a regular price/sale price scenario. Here the consumer may evaluate the quality of the product based on the regular price and the sacrifice for the product based on the actual selling price. The tradeoff between these two assessments results in the acquisition value for the offer. However, since the presence of the reference price compared to the sale price suggests a "deal," positive transaction value also exists. Perceived value for the offer will then be equal to the acquisition value combined with the positive transaction value.

This same concept is illustrated by the use of either coupons or rebates. In each of these situations the regular market price is the reference price used and the lower selling price is the price obtained by subtracting the amount of the coupon or rebate from the market price. The difference between the reference price (market price) and the lower selling price (the price minus coupon or rebate) results in positive transaction value.

Transaction value affects the perceived value of an offer. Positive transaction value is the perceived reduction of a loss (the price paid for a product) by a small gain (the savings from the coupon or rebate) and, when segregated in this manner, the perceived value of the offer is enhanced because the positive transaction value combines with acquisition value to enhance the perceived value of the offer.

Transaction value can have a positive or negative affect on perceived value. A mail-in rebate is an example of both the positive and negative effects of transaction value on perceived value. The mail-in rebate provides positive transaction value by reducing the regular price by the amount of the rebate. It also provides negative transaction value (transaction disutility) from the delayed reduction of the regular price (having to wait for the manufacturer to mail back the refund). It should be noted that the use of a coupon also possess transaction disutility because of the extra effort involved in clipping out the coupon and taking it to be redeemed; however, this effort is viewed as being less cumbersome than using a rebate that must be mailed to the manufacturer.

The price-perceived quality conceptualization (Monroe and Krishnan 1985), prospect theory (Kahneman and Tversky 1979), the discount literature, and Thaler's (1985) transaction utility theory are used to derive the following theoretical propositions.

Theoretical Propositions

The first five propositions are derived from the original price-perceived quality model and refer to a selling situation without a "deal" being offered or perceived by the buyer. All propositions are understood to be under conditions of *ceteris paribus*.

1. There is a positive relationship between price and buyers' perceptions of product quality.
2. There is a positive relationship between price and buyers' perceptions of sacrifice.
3. There is a positive relationship between buyers' perceptions of product quality and their perceptions of acquisition value.
4. There is a negative relationship between buyers' perceptions of sacrifice and their perceptions of acquisition value.
5. There is a positive relationship between buyers' perceptions of acquisition value and their willingness to buy.

The next propositions refer to a selling situation whether a "deal" is offered and perceived by the buyers.

6. There is a negative relationship between buyers' perceptions of sacrifice and their perceptions of transaction value.
7. There is a positive relationship between buyer's reference prices and their perceptions of transaction value.
8. There is a negative relationship between buyers' perceptions of the amount of effort required to obtain the "deal" and transaction value.
9. There is a positive relationship between buyers' perceptions of transaction value and their overall perceptions of the value of the offer.
10. There is a positive relationship between buyers' perceptions of acquisition value and their overall perceptions of the value of the offer.
11. There is a positive relationship between buyers' overall perceptions of value of the offer and their willingness to buy.

Proposition eleven is a restatement of proposition five for the "deal" situation.

Historical Review of Selected Pricing Research

Price-Perceived Quality

Empirical work in the price-perceived quality research stream can be traced back to Leavitt (1954) who concluded that higher prices may sometimes increase a person's satisfaction with a purchase because a higher quality is imputed by the higher price. Tull, Boring and Gonsoir (1964), Gabor and Granger (1966), and McConnell (1968), also concluded that there seems to be a positive price-perceived quality relationship.

While single cue studies were useful in establishing the existence between price and perceived quality, a criticism was that when price was the only cue available subjects would obviously use it to infer quality. Following these single-cue studies, several studies were conducted that

manipulated not only price, but other extrinsic variables such as brand and store name or image. In general, these studies found that sometimes the brand effect is larger than the price effect; however, the presence of a brand name seemed to enhance the price effect (Monroe and Krishnan 1985). That is, when price and brand name are both present, there tends to be a greater price-perceived quality effect than when price is the only cue available. Brand name tends to be a stronger indicator of perceived quality than price.

There have been several reviews conducted in the price-perceived quality area. Monroe (1973) reviewed several price-perceived quality research efforts and concluded that there were indications of a positive relationship between price and perceived quality over some price ranges for certain product categories. Olson (1977) also supported the notion of a positive price-perceived quality relationship and pointed out the need for better theoretical justification in most empirical work. Monroe and Petroshius (1981) agreed that even though the results in the price-perceived quality literature are mixed, there does seem to be a positive price-perceived quality relationship. Finally, Monroe and Krishnan (1985) concluded that most of the past price-perceived quality research could be categorized as exploratory in nature and has contributed very little toward resolving the question of when price is used to infer quality.

In general, there seems to be a consensus that research in this area has been haphazard and exploratory in nature. There has been little systematic attempt to analyze the price-perceived quality relationship and determine what factors may affect this relationship.

Discounts in Subjective Evaluations of Products

There has been very little empirical research on the effect of discounts on buyers' subjective evaluations of products. Barnes (1975) varied comparison price cues and semantic cues for retail advertisements. A comparison price cue is provided when an explicit comparison (reference) price is paired with the actual price in an advertisement. Semantic cues are specific words or phrases that are paired with the price cues, e.g., regular price, sale price, special or x% off. Barnes (1975) found that product advertisements using semantic cues such as "regular/sale" were perceived as more believable and as offering a better value for the money than cues such as "special".

Fry and McDougall (1974) studying consumer perceptions of advertisements that contained discounts of varying sizes found that there was a positive relationship between acceptance of price as the lowest in the area and the magnitude of the discount. Blair and Landon (1981) found that advertisements with comparison (reference) prices produced larger perceptions of savings than advertisements without reference prices. Keiser and Krum (1976), like Barnes, found that advertisements using the regular price/sale price cue were more likely to create a perception of a true reduction in price. Berkowitz and Walton (1980), studying aspirin, fans, and cameras, found significant differences for comparison cues for all products, but significant semantic cues for cameras only.

These findings suggest that the acceptance of an advertised regular (reference) price depends on the size of the sales discount and whether or not a regular price is quoted. Also, there seems to be greater acceptance of a regular price if it is provided in the advertisement regardless of its veracity. Della Bitta, Monroe, and McGinnis (1981) expanded on the above research and found that the differences in magnitude of price discounts did produce greater perceptions of value. They concluded that perceptual responses are more likely to be related to the overall references provided than to specific price levels per se.

Liefeld and Heslop (1985) studied the effects of reference prices and advertising contexts on consumer perceptions of the ordinary price of products. They concluded that

the presence of a sale price condition lowered respondents' estimates of the ordinary sale price. The latter result could be due to the fact that no reference price was presented with the sale price and, therefore, consumers based their reference (ordinary) price relative to the sale price presented.

In general, it has been found that responses to price statements are affected by both the price level and the size of discount implied by a price comparison. None of the above research on discounts investigated such as phenomena as coupons and rebates on buyers' perceptions of products or offers.

Coupons and Rebates

For years, coupons have played a substantial role in the promotion and purchasing of products. As Hisrich and Peters (1984) state, "The coupon is epidemic, omnipresent, and suddenly a controversial marketing tool, alternatively commanding our respect through the sheer volume of its use and in citing our suspicion over its effectiveness." Cotton and Babb (1978), studying the response of consumers to promotional deals for dairy products, concluded that promotional deals substantially increase purchase levels and this increase is greater than the increase obtained by simply reducing price.

According to Hough (1980), "if cents-off coupons were the hot promotion of the 1970s, cash refunds give every indication of being the growth event of the 1980s." The big boost for rebates came when they were offered by auto companies. Since the late 1970s, the use of rebates has grown substantially. So, as shown, coupons and rebates do play a very significant role in our economy, and it would be useful to examine how such promotional tools actually affect a buyer's subjective evaluation of products.

Conclusions

Essentially similar propositions about how buyers form perceptions of value independently have been advanced from two different perspectives. Based on the price-perceived quality conceptualization, it has been proposed that buyers cognitively trade-off positive perceived utility based on quality perceptions with negative perceived utility based on price perceptions to form overall perceptions of value. Adapting prospect theory, Thaler (1985) has conceptualized a similar process and has labelled the outcome acquisition utility (re-named in this paper as acquisition value). Moreover, by explicitly incorporating the notion of a reference price, this trade-off model can be expanded to include perceptual processes buyers may use when evaluating a purchase "deal."

Available empirical evidence suggests that:

1. There does exist a general price-perceived quality relationship. However, the strength of the relationship varies depending on the relative strength of other external cues, and the degree buyers are familiar with the intrinsic attributes of the product (Rao 1986).
2. Advertised "deals" featuring both the regular price and actual price and/or the magnitude of the price discount tend to produce greater perceptions of value than other forms of price promotions.
3. There is no known empirical evidence on how the use of coupons or rebates as forms of price promotions influence buyers' evaluations of product offers.

While the empirical evidence is limited, there does appear to be some support for the propositions presented in this paper. In particular, it would appear that the offer of a deal could enhance buyers' overall perceptions of the value of the product acquisition and purchase. However, it is unclear whether this perceived value enhancement is monotonically related to the size of the discount. Moreover, when the buyer must engage in special redemptive

efforts, such as coupon clipping and waiting for a rebate, it is unknown the degree that these efforts are perceived as an immediate reduction in the gain due to the deal, or as a separate cost (loss). Research efforts currently underway are attempting to answer these issues.

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THE STORY, THE FRAME, AND THE CHOICE

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Abstract

Much of the information processing literature has focused on how individuals handle information and make choices in particular task settings. Dawes (1975) has suggested that the performance observed may well be task specific, and that the behavior exhibited depends on the task structure. This research investigates how individuals come to a specific task (whether to purchase property insurance or not), how that initial response affects the reference points selected, and how both relate to the resultant attitudes and intentions. The results indicate that subjects' initial Affect and Cognitive Story do relate significantly with the reference points selected and with the specific attitudes and intentions relating to the property insurance task.

Introduction

There are a multitude of approaches that can be employed to explain and predict how individuals make choices under uncertainty. In recent years, the traditional expected utility approach has been supplemented by prospect theory. Prospect theory, as developed by Kahneman and Tversky (1979), proposes that the task environment directly influences how the decision is framed (i.e., how the individual perceives the various alternatives, the consequences derived from selecting an alternative, and the likelihood of particular consequences occurring). As an individual edits a problem, she/he codes the potential outcomes as being either above or below a particular reference point. Potential outcomes are framed as a gain or a loss which directly influences choice. Individuals are theorized to be risk takers in the domain of losses and risk avoiders in the domain of gains.

Numerous experiments have found that, in highly structured task environments, prospect theory can predict choices. See Kahneman and Tversky (1984) for a literature review. The task environments are so structured that, in the words of Kahneman and Tversky (1979), "Either the original formulation of prospects leaves no room for editing or the edited prospects can be specified without ambiguity." Thus, it is assumed that the subject's decision frame is forced by the task she/he is given by the experimenter.

Prospect theory has proven less potent when used to explain how choices are made in unstructured situations. In a recent set of experiments, Lichtenstein, Wagenaar, and Keren (1985) investigated this issue by using story problems that had common deep structures and different surface structures. A story problem's surface structure is the story as presented, and its deep structure is the representation of the problem used by the respondent or as specified by psychological theory (Lichtenstein, Wagenaar, and Keren 1985). They investigated the relationship between surface structure and choice by developing eleven variations of a problem that, according to subjectively expected utility theory, had a common deep structure. They found that changing aspects of the surface structure (e.g., whether the individuals at risk were island residents or hostage children) greatly changed the proportion of respondents selecting the risk averse alternative. After discussing prospect theory's editing operations, Lichtenstein, Wagenaar, and Keren (1985) conclude that these operations do not provide a basis for understanding why their surface structure variations produced such different choices.

Fischhoff (1983) first pointed out that prospect theory's tests had been limited to highly structured tasks in which the subject's frame was not measured. To overcome this problem he presented subjects with problems that could be framed in multiple ways, measured their reference points, and recorded their choices. He found no systematic association between a subject's frame and his or her choice. Puto (1985) has suggested that, if generally

true, Fischhoff's (1983) findings imply that "the domain of prospect theory may be limited to highly structured gambles" and reference points might be unimportant for explaining choice. He also suggests that Fischhoff's (1983) findings may be attributable to poor reference point measures. Consequently, Puto (1985) conducted a study in which he sought to manipulate the frames used by subjects by varying the task description, measuring their reference points, and then recording their choices. The results of Puto's (1985) study suggest that the reference point is related to choice: however, it leaves open the question of how useful prospect theory is for explaining unstructured choices.

We argue that prospect theory's difficulty with unstructured task environments is partially attributable to the inadequacy of its editing phase. The editing phase consists of six basic operations. As summarized by Fischhoff (1983) and Lichtenstein, Wagenaar, and Keren (1985), they are: (a) coding (describing each outcome in terms of a reference point), (b) segregation (isolating the riskless from the risky components of a prospect), (c) cancellation (discarding the components that are shared by all prospects), (d) combination (adding probabilities that are associated with identical outcomes), (e) simplifications (rounding probabilities or outcomes), and (f) detection of dominance (eliminating dominated prospects).

One weakness is that it is a pure encoding approach to the issue of how surface structures are transformed into deep structures. Prospect theory explicitly predicts how a specific set of probabilities and outcomes will be transformed into a decision frame, i.e., how the manner in which the objective data are presented influences the subject's framing of the decision.

We maintain that an individual's framing of a decision is influenced by the information she/he accesses from memory. The information accessed is influenced by the surface story. Both our criticism of prospect theory's editing phase and our argument that accessed information influences framing have been made by previous researchers, including Tversky and Kahneman (1981). In their words, "a diversity of factors determine the reference outcome in everyday life. The reference outcome is usually a state to which one has adapted; it is sometimes set by social norms and expectations; it sometimes corresponds to a level of aspiration, which may or may not be realistic" (Tversky and Kahneman 1981, p. 456).

Our contribution is that we will investigate the role played by two types of stored beliefs. Specific actions may be viewed as intrinsically good or bad, and these feelings (Affect) may influence how the decision is framed.

The second type of stored belief is a simple cognitive description (Story) of the choice situation. Although the exact nature of this stored description, whether a script, schema, or some far richer representation, is unknown (Alba and Hasher 1983), there is little controversy over the fact that one's response to a choice situation can be influenced by one's recalled beliefs about the situation. These recalled beliefs can focus the subject's attention upon particular dimensions of the decision, or even suggest (contain) a reference point.

In addition to influencing how a decision is framed, affect and the simple cognitive story may have two other consequences. First, either or both may directly influence choice. Second, either or both may mediate the consequences of surface task factors. If memory has a powerful influence upon the reference point, then the choice of a reference point may not be influenced by how the experimenter presents the task.

The role of these memory factors will be investigated in the context of an insurance purchase decision. Reasons for utilizing insurance are two-fold. First, an insurance purchase decision can be framed in multiple ways. Certain potential framings predict that insurance will be purchased, while other potential framings predict that it will not be purchased.

Slovic, Fischhoff, and Lichtenstein (1982) suggest the most straightforward decision frame is the decision frame which uses the no gain/no loss state as the reference point. Using this reference point, the insurance premium is viewed as a small certain loss while the option of not insuring is viewed as a risk involving a large uncertain loss at worst and no gain at best. Since risk seeking is common in the domain of losses (Hershey and Schoemaker 1980; Payne, Laughhunn and Crum 1980; Slovic, Fischhoff, and Lichtenstein 1982), individuals using this frame would be expected to prefer the risk of a large uncertain loss over the cost of a small certain loss; i.e., they would not be expected to purchase insurance.

Another reference point suggested by Slovic, Fischhoff, and Lichtenstein (1982) is the loss of the premium. A possible rationale for the existence of this reference point would be that buying insurance is socially desirable. Using this reference point, the decision is framed as though the premium were paid and the small certain loss taken. Individuals using this frame would view the amount of the premium as being in the domain of gains, and the difference between the premium and the total loss incurred as the possible loss. Because the value function is steeper for losses than gains, the risk of a large uncertain loss would be viewed negatively. Thus, it would be more attractive to stay at the reference point of paying the insurance premium.

Kahneman and Tversky (1979) have suggested that an individual could use zero assets as their reference point. Use of this reference point would lead to the framing of all potential outcomes in the domain of gains. Consequently, the risk averse course of action of purchasing insurance would be selected. Kahneman and Tversky (1979) argue that this particular framing is the one assumed by expected utility theory. There is some empirical support for the contention that some people use the expected utility frame. In Wiener, Gentry, and Miller's (1985) study, one frame the individuals could use corresponded to the frame posited by expected utility theory. Individuals who used this frame were more likely to express a willingness to purchase flood insurance than those who did not use this frame.

Fischhoff (1983) has suggested that decisions are framed so that the worst case is the reference point. Applied to the insurance decision, this implies that the consequences of an uninsured event, such as a flood, would be the reference point. Use of this framing would place all alternatives in the domain of gains, and should lead to an increased likelihood of purchasing insurance.

Besides providing a variety of possible reference points, a second reason for investigating insurance is that it is a familiar decision that numerous researchers have observed can be influenced by social norms (Hershey, Kunreuther, and Schoemaker 1982; Kahneman and Tversky 1979; Slovic, Fischhoff, and Lichtenstein 1982). Two possible paths by which these social norms influence the decision have been proposed. Kahneman and Tversky (1981, 1984) argue that the norms will influence how the decision is framed. Hershey, Kunreuther, and Schoemaker (1982) suggest that the social norms will dominate the framing process. Consequentially, the purchase decision may not be influenced by the reference point. At present, all that is known is that subjects are much more likely to pay for protection when the term "insurance premium" is used rather than the term "sure loss" (Hershey and Schoemaker 1980; Schoemaker and Kunreuther 1979; Slovic, Fischhoff, and Lichtenstein 1982; Slovic, Fischhoff, Lichtenstein, Corrigan, and Combs 1977). Hence insurance provides a means for investigating whether, in an unstructured

setting, the reference point influences the individual's decision.

Methodology

A two-stage data collection process was employed. During the first stage the beliefs concerning insurance, stored in the subject's memory, were measured. In the second stage subjects were shown an advertisement, and given the (role play) opportunity to purchase a theft insurance policy. At this time their perceptions of the advertisement, reference point, and choice were measured. Below the key elements of the study, and their measurement, are discussed.

Affect. Subjects gave their affective reaction to the term "insurance" using seven-point scales with the labels "Good/Bad," "Like/Dislike," and "Positive/Negative."

Story. Two possible semantic descriptions of insurance have been suggested by previous researchers. Slovic et al. (1977) have suggested that individuals resist buying insurance because they view it as a sure loss. Kahneman and Tversky (1984) have suggested that people willingly buy insurance because they perceive it to be protection. Wiener, Gentry, and Miller (1985) found that people who perceived it as protection were more likely to indicate a willingness to buy insurance than those who perceived it as a sure loss.

Three approaches were used to measure the story used by the subjects. First, the subjects were shown statements about insurance: 1) Buying insurance is a gamble involving losses; the insurance premium is a certain loss that is bet against the small possibility of incurring a large loss; or 2) Buying insurance protects my assets; I pay a small fee--premium--to make certain that I will be able to keep what I have). They were asked to make at least three statements in support of each position and at least three that are not in support. Second, the respondents were asked to indicate their level of agreement with the two general perspectives on seven-point "Strongly Agree/Strongly Disagree" scales. Last, they were asked to choose the perspective which best represents their view of the insurance purchase. It was expected that respondents that viewed insurance in one way (a gamble, for example) would find it much easier to write supportive statements for "insurance as a gamble," write contradictory statements for "insurance as protection," express a higher level of agreement with the "insurance as a gamble" statement, and choose that as their initial representation of insurance.

Reference Points. There are many potential reference points that can be used for the insurance purchase decision. Reference points can be formulated either (1) in terms of assets or (2) in terms of gains, losses, and neutral outcomes. Prospect theory research suggests that the latter formulation is more common; hence it is the one we have used. This formulation implies that there are four potential consequences of the property insurance purchase decision: (1) owning insurance/no theft; (2) owning/theft; (3) not owning insurance/theft; and (4) not owning insurance/no theft.

The first two consequences have the same monetary consequence, i.e., a premium is paid. Hence, as Lichtenstein, Slovic, and Fischhoff (1983) have suggested there is a sound basis for considering "owning insurance" to be a potential reference point. On the other hand, as Loomes and Sugden (1982) have argued, an individual may care about more than the payoff she/he receives. She/he may also care about the payoff she/he would have received if she/he had made a different choice. From this perspective, the two consequences are obviously very different. In light of these two reasonable (albeit inconsistent) viewpoints, two sets of measurements were made of the decision frame. In the first, the two consequences corresponded to two potential frames. In the second, a single potential frame "owning insurance" was used. The remaining two consequences directly correspond

to the "worst case" frame suggested by Fischhoff (1983) and the "straightforward" frame suggested by Slovic, Lichtenstein, and Fischhoff (1983). A reference point can be measured in one of two ways: (1) by selecting one of the reference points, as was done by Fischhoff (1983) and Puto (1985) and (2) by indicating their level of agreement to statements containing the reference points as was done by Wiener, Gentry and Miller (1985).

In the first set of measures subjects were asked to select the reference point that they: thought of first, paid most attention to, and compared other consequences to. In the second set they were asked their level of agreement (seven-point Likert Scale) with the assertion that they thought of a specific reference point first, and then asked to select the consequence that was most important to them when making their decision.

Multiple questions (first, attention, compare, and important) were used to explore the relationship between the reference point, and other (more familiar) points of interest. Previous research has established that the initial value (consequence) considered can serve as an anchor. If a value (consequence) serves as an anchor then other values (consequences) are being viewed relative to the initial value. If alternatives are being compared to a particular consequence then this consequence will both be attracting attention (i.e. mental processing effort will be focused on this consequence) and be important.

Ads. As noted above, previous research has concentrated upon investigating how the communicator's presentation of a problem influences framing and choice. In our study advertisements were used as the communicator-generated source of influence. Three advertisements were used, with one-third of the subjects seeing each one. The advertisements were presented in print form each, stressing one of the possible reference points (the loss of all one's possessions, the no loss/no gain state, and the loss of the premium) suggested by Slovic, Fischhoff and Lichtenstein (1982).

The advertisements were professionally created and produced to minimize the possibility of the results being biased by the quality of the ads. All ads contained illustrations, approximately the same length of copy, same size and type, and similar layouts. Evaluated by eight semantic differential style questions, the advertisements were checked to insure that they created the frame they sought to induce.

Attitudes and Purchase Intentions. Individuals were initially asked to assess the likelihood that they would buy the advertised property insurance. This was followed by seven Likert questions focusing on their purchase intentions and attitudes towards the policy. Finally, they were forced to decide whether they would or would not buy the policy.

Hypotheses

The expected associations are summarized in Figure 1. It is assumed that even though affect and cognitive story are related, they have independent effects. Affect will encompass the positive associations generated by many factors, of which protection is only one. It is assumed that in our design the advertisements are of equal persuasive power, hence they influence choice solely through their influence on the reference point. The expected associations are discussed in more detail below.

H₁: Liking insurance is associated with buying insurance.

One's general Affect toward insurance is related to the choice decision made in specific situations. To some extent, the choice decision will depend upon the task structure as represented by the decision theoretic details (consequences and probabilities), but there also will be utility (disutility) that is derived from buying and/or owning insurance. Social norms may play a dominant role in the individual's willingness to buy insurance (Hershey,

Kunreuther, and Schoemaker 1980), and those norms may determine the nature of the individual's affective response to insurance.

H₂: People who like insurance will think of it as protection.

An individual's affective response is expected to be consistent with the cognitive description the subject associates with the action. The description should support the feeling, i.e., if the action is viewed as being positive then the cognitive story should contain positive associations. This hypothesis, that positive affective judgments should be associated with the favorableness of the information accessed from memory, is consistent with existing memory based accounts of the judgment process (Kisielius and Sternthal 1986; Petty and Cacioppo 1981).

H₃: Liking insurance is associated with using the worst case reference point.

Previous researchers (Kahneman and Tversky 1983; Puto 1985; and Thaler 1985) have suggested that affective responses and framing should be linked. We expect that the decision will be framed so that the act's coding (in terms of the reference point) and the affective reaction are consistent. A simple consistency requirement is that the more favorably an act is perceived, the more likely it is to be perceived as a gain, and the less likely it is to be perceived as a loss.

H₄: Thinking of insurance as protection is associated with using the worst case reference point.

H₅: It is expected that the cognitive story will be associated with both choice and the reference point.

Specifically, those who view insurance as protection should be more likely to indicate a willingness to buy insurance. This is expected because protection is an insurance benefit that is independent of the actual monetary consequences. As Wiener, Gentry, and Miller (1985) have argued the gamble versus protection semantic framing is parallel to the no gain/no loss versus worst case reference point framing. We expect to find these associations.

H₆: Using the worst case reference point is associated with buying insurance.

It is expected that the subject's choice of a reference point will be associated with his choice. Subjects selecting the no gain/no loss reference point should be far less likely to purchase insurance than those selecting the worst case reference point. Prospect theory predicts that individuals selecting either owning insurance consequence should be more likely to buy insurance than those selecting the no gain/no loss reference point. The alternative view, suggested by Loomes and Sugden (1982), implies that individuals who use theft/own insurance as the reference point will be far more likely to buy insurance than those using the no theft/own insurance reference point.

Results

This section will discuss the relationship between the components of the model presented in the previous section. First, though, we will discuss the descriptive statistics since they provide insight into how consumers view the insurance purchase decision.

Descriptive Statistics

Table 1 presents a summary of the responses on the Affect, Story, Frame, and Decision variables. The means for the three Affect variables (6.1, 5.6, and 5.4, with 4.0 being the neutral point) indicate that the term "insurance" elicited a generally positive response from the respondents. The story was measured in three ways: a

count of the supportive and the contradictory statements given for the two alternative insurance stories ("protection" or a "gamble"), the level of agreement with the two stories, and the choice with which they agreed most. The protection story elicited more cognitive responses than did the gamble story, indicating that the respondents may have been more familiar with the logic of the protection story. There were more statements made in opposition to both stories than were made in support. There was little difference in the overall mean agreements with the two stories, although the respondents agreed slightly more with the protection story ($\bar{X} = 3.1$) than with the gamble story ($\bar{X} = 2.9$). However, when the respondents were forced to choose one story, 71% chose the protection story.

The respondents rated the three ads similarly, as there were no significant differences in the mean ratings across groups. Moreover, all three ads were rated positively (means greater than the neutral point) on all dimensions except for the informative/uninformative one. The ads were not significantly related to any other measures.

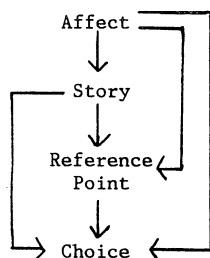
Three different measures were used to determine which reference point people use when contemplating the purchase of property insurance. All three measures indicate that the respondents focus on the possible negative consequences. Given that more than 80% of the respondents focus on the possible property loss rather than the security associated with owning insurance or the opportunity cost associated with the insurance premium, prospect theory would predict that the decision would be to purchase insurance (as discussed earlier). One other important finding is that the choice of reference point can vary substantially, depending upon the wording of the question (first thing thought of, situation receiving the most attention, or the situation used as a basis of comparison). For example, 83% selected a reference involving the loss of property when asked about the situation receiving the most attention, while only 66% selected a similar reference point when asked which situation they thought of first.

The intention and attitude measures also indicate that the respondents were receptive to the notion of property insurance. When asked if they would buy insurance if they had to make a decision immediately, 54% said that they would.

Detailed Analyses

Our analysis focuses upon three issues. The first is whether owning insurance is a meaningful reference point. The second is whether there is empirical support for the pairwise associations between variables that have been advanced above. The third is whether there is empirical support for the model depicted by Figure 1.

FIGURE 1
EXPECTED RELATIONSHIPS IN THE INSURANCE PURCHASE DECISION



Is Insurance a Reference Point? If owning insurance is a useful reference point, then there should be little difference between respondents who selected owning insurance/theft and those who selected owning insurance/no

theft as the first (or most attention receiving, or point of comparison) consequence.

This issue was investigated by chi square analysis. In each chi square test, subjects selecting the insurance/no theft consequence were compared to those selecting the insurance/theft consequence. In one set they were compared to their stated willingness to buy the advertised insurance policy, and in the other to their selection of the protection or the sure loss cognitive story. The findings strongly suggest that the two reference points are very different. Individuals who first thought of the theft/insurance consequence were more likely to think of insurance as protection ($p \leq .05$) and somewhat more likely to say they would buy insurance ($p < .2$). Those who used theft/insurance as the point of comparison were more likely ($p < .1$) to view insurance as protection. Those who reported paying most attention to theft/insurance were also more likely ($p < .05$) to say they would buy insurance. In all other cases the results were similar albeit not statistically significant.

There are a number of possible reasons why the two insurance reference points differ. One is that people think of the alternative they would have received if they had made a different choice. A second reason is that people are responding to an event (i.e. theft). In other words, if a person thinks of the situation where a theft occurs then s/he will: (1) think of insurance as protection and (2) want insurance.

Pairwise Findings. The hypotheses advanced above are viewed initially in terms of their disaggregated pairwise relationships. The results are presented in disaggregated form because neither the story nor reference point measures are well suited for being transformed into multi-item single measures. This weakness stems from our use of so many nominal measures (i.e. select a story or select a reference point), and the mix of specific issues addressed (e.g. which of four consequences attracted the most attention, and which of three consequences were most important).

The strongest results of the pairwise analysis are listed below. Subjects selecting the protection cognitive story both held a more favorable attitude towards insurance and were likely to express a willingness to buy insurance. However, story choice and choice of a reference point were unrelated. An individual's Affect towards insurance was generally associated with both choice of a reference point (if you like insurance you select the worst-case reference point) and expressed intentions. A subject's level of agreement with a reference point (or his selection of it) was associated with purchase intentions in the manner predicted by prospect theory. The aforementioned results do not hold for all measures, for example agreement with a cognitive story is not significantly correlated with Affect, rather these results constitute common patterns of findings. We believe that the sensitivity of the results to how measures were worded is itself an interesting, albeit disquieting, finding. Tables detailing measures and findings will be furnished upon request.

The Model

Path analysis was used to analyze the model depicted by Figure 1. An initial analysis found that the Story (i.e., gamble vs. protection view of insurance) is not significantly related to either the reference point or buying intentions when Affect is included in the analysis. A more detailed analysis revealed that the pairwise story/reference point and story/intent to buy relationships are spurious, i.e. they are attributable to Affect. Consequently the model was reanalyzed without the cognitive story. The estimated standardized beta coefficients ($p \leq .01$) are depicted in table one. It is of interest that only 13% of affect's influence upon choice operates through the reference point. It is of equal interest that only 18% of the total association between the reference point and choice is spurious, i.e. attributable to Affect.

TABLE 1
RESULTS OF THE PATH ANALYSIS

	<u>Direct Effects</u>		<u>Indirect Effects</u>	
	<u>R</u>	<u>Choice (C)</u>	<u>R</u>	<u>C</u>
Affect (A) Reference Point (R)	.191	.302		.049
		.254		

$$R^2 = .22$$

Conclusions

This study investigated the relative importance of non-task constructs (Affect, Story) and task-determined constructs (Advertisements, Reference Points) on Choice. It was found that Affect relates directly to Choice and indirectly to Choice through the Reference Point. Attempts to manipulate the Reference Point selected through print advertisements were not successful.

Major problems encountered in this study were the need to structure the task so that the reference points and its measures could be understood by the subjects. We used a variety of such measures, with mixed results.

Future research should continue to develop better measures of relevant reference point usage in applied settings. Also, future research should continue to investigate the role that non-task variables (Affect, Story) play on the task's dependent variable (Choice).

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Gender and Situational Influences on the Syntax of Consumption Rituals

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Abstract

Interpreting the role played by manufactured products in the fantasies that accompany everyday consumption rituals, Rook and Levy (1983) argue that such products afford "complex ways of expressing sexual and social strivings." Their reference to the "grooming vocabulary" implies the use of products as linguistic units in the language of grooming, a language acquired by socialization to age- and gender-appropriate grooming rituals. The conventionalized languages acquired during ritual socialization permit individuals who share the same socialization experiences to make "forceful judgments about the appropriateness, normality, and even morality" of ritual outcomes. (In grooming, the ritual outcome is a particular "look"; in meal planning the ritual outcome is a menu.) Social judgments of the outcomes of an individual's consumption rituals appraise both the semantic content and the syntax of the outcome. Were the attributes of the products chosen appropriate for the age and gender of the user, and for the usage situation? Was the way in which the products were combined/arranged appropriate for the age and gender of the user, and for the usage situation? (Judgments of syntactic appropriateness include, for example, whether items chosen were combined in the correct order, and whether their arrangement conveys the correct degree of complexity.)

This paper reports the results of a study of the effects of gender and situation on the syntax of consumption behavior. The hypotheses tested were confirmed: (1) more formal situations favor complex syntax; (2) feminine gender favors complex syntax. Implications of these findings for marketing strategy are discussed.

A META-ANALYSIS OF THE DIFFUSION OF INNOVATIONS LITERATURE

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Abstract

The 1840 published studies relating to 20 of Rogers and Shoemaker's generalisations on the diffusion of innovations are meta-analysed by way of assumptions and simple techniques addressing sampling error. It is found that most of the discrepancy between studies supporting and not supporting these generalisations can be explained as statistical artifacts, and that there are likely to be correlations of order 0.20 between most independent variables and time of adoption. Such correlations are capable of improving our success rate in predicting earlier/later adopters to 60% (for one independent variable).

Purpose Of The Paper

The purpose of this paper is to begin the task of meta-analyzing the empirical literature concerning the diffusion of innovations. This beginning is achieved by first deriving a set of reasonable assumptions about research methodologies from a convenience sample of the diffusion literature. These assumptions are then used to guide a meta-analytic *thought experiment* on twenty of the major generalizations advanced by Rogers and Shoemaker (1971), generalizations which are based on a total of 1840 empirical studies, and which represent the variables most frequently researched by diffusion scholars. The thought experiment thus encompasses a major portion of the literature and essentially allows us to infer upper and lower bounds on the strength of the bivariate relationships postulated by Rogers and Shoemaker. The experiment allows us to test some of the basic tenets of diffusion theorists - namely that time of adoption is related to various independent factors. We seek to determine which of these relationships are spurious artifacts of small-sample surveys, and which represent valid correlations between time of adoption and some underlying characteristic of the individual, the innovation or the process by which the two are brought together. If we can establish some valid correlations then it may be worthwhile investing substantially greater efforts into a deeper and more systematic meta-analysis. Alternatively if we fail to find robust relationships then we are unable to choose between two competing (but equally pessimistic) conclusions. Firstly, that our basic tenets are somewhat flawed or overly simplistic. Secondly, that relationships exist but are obscured by some unspecified set of moderator variables. Indeed the contingency theories of innovative behaviour advanced by Rogers (1983) and Midgley and Dowling (1978) would suggest that communication and situational moderators are necessary to explain relative time of adoption well. However, since these moderator variables have not been measured in the past this second conclusion would be tantamount to saying that 30 years of research had been to some degree wasted.

Background

Science progresses by cumulating and organising empirically verifiable knowledge. As the knowledge base of a discipline increases so our ability to falsify earlier theories improves, as does the opportunity for advancing more sophisticated frameworks. However, in the social sciences it is widely recognized that progress has been relatively slow. This is undoubtedly due to a variety of factors, amongst which are:

1. the difficulty of measuring mental processes,
2. a reliance on correlational methodologies (which provide relatively weak tests of causality),
3. the difficulty of designing sensible experiments on social behaviour,

4. the widely differing measures and methods used even within a set of studies on the same topic (the lack of replication),
5. the low statistical power of the generally small-sample surveys employed by most researchers.

More relevantly to this paper one major factor retarding progress has been a forced reliance on the literature review as a means of cumulating the knowledge in any one area. At best, a written review of empirical findings is a weak approach to synthesis, particularly when the review relies on simple counts of the studies for and against a postulated relationship. Indeed it will be argued later that this procedure (termed 'vote counting') has the potential to combine with point 5 above in a dangerously misleading manner.

Recently quantitative techniques for cumulating results across studies have become available. These 'meta-analysis' techniques hold out the promise of providing a rigorous approach to the cumulation problem, an approach which should yield more substantive insights as well as more precise estimates of the strength of relationships. There are two forms of 'meta-analysis'. The one, following Glass(1976), seeks to explain apparent variation in the strength of a relationship across studies by examining numerous characteristics of the methodologies used by those studies. The other form follows Hunter *et al*(1982) and assumes such variation ('conflict in the field') is largely the product of sampling error, range restriction and measurement unreliability. Hunter *et al* (1982) report that in 152 applications of their techniques these three statistical artifacts account for 72% of the apparent variation in effect sizes (strength of relationships). Given the purpose of this paper we will concentrate on sampling error here. Such errors are likely to be the most important artifact in the diffusion literature. It would also require substantial effort to handle other artifacts/study characteristics, particularly as adoption studies tend not to include much detail of the methodologies used. Furthermore, since most were conducted in the 1960's and 70's they tend to use somewhat unsophisticated methodologies (for example reliability is seldom reported). Thanks to the work of Hedges and Olkin (1980) we can assess the effects of sampling error by simply ascertaining the average sample size of the studies and the proportion of them that support the postulated relationship (under certain assumptions detailed below).

To digress, it might be argued that a meta-analysis of such an early literature is of limited value. Surely research on the diffusion of innovations has become more sophisticated since the 1970's? While this may be true such an argument misses the point on at least two counts. Firstly, that much of the subsequent conceptual elaboration is a direct result of early researchers' perceptions of apparent 'conflict' between the findings of comparable studies. Secondly, that much normative prescription on new product marketing implicitly assumes that individual characteristics are related to time of adoption. Now the methodology to re-examine the early literature is available it is surely worthwhile questioning how firm the foundations of the field are.

The reason sampling error is important relates to a common misconception of the meaning of significance levels. This misconception being that the use of a 5% significance level guarantees an error rate of 5% or less. *In fact it only does so if the null hypothesis is true.* If the null hypothesis is false then the error rate can go up to 95%. To take a simple illustration from Hunter *et al*(1982, p21) who show that if the true population correlation was 0.20 and all studies were done with a sample size of 40 then 2 studies out of every 3 would find the correlation to be

not significant. Furthermore, as demonstrated by Hedges and Olkin(1980), such a situation would get worse the more studies that were done - leading reviewers to incorrectly assume the relationship did not exist. Indeed these authors highlight the fact that for the magnitude of effects we expect in the social sciences, and even for sample sizes of 100 or more, the power of vote-counting procedures can be asymptotically zero. Note we are only examining bias that might have been brought about by the low statistical power of early diffusion studies. This paper does not address the 'pro-innovation bias' of the field (Rogers, 1976), or biases brought about by the failure to publish non-significant findings (the 'file drawer problem' - Rosenthal, 1979).

Turning to the diffusion literature then it could be argued that we would expect relatively small correlations between (say) the characteristics of individuals and their subsequent time of adoption. This is because of the various product, communication and situational effects we might expect to moderate the relationship between the measurable characteristic of a particular individual and his/her behaviour toward a specific innovation. This contingent view of adoption being advanced by Midgley and Dowling(1976), amongst others. Midgley and Dowling argue that correlations of around 0.25 would seem reasonable under most circumstances - just the magnitude of effect that would be hard to detect without large sample sizes.

Methodology

From a convenience sample of 95 published adoption studies we estimated the geometric mean sample size of the adopter and non-adopter groups used in these studies. Most adoption studies employ the two group methodology, contrasting the criterion variable between the groups. Here the values were 74 adopters and 173 non-adopters in a 'typical' sample of 247. 72 of the studies used a measure of effect size (most often the t statistic) while 23 were correlational. 47 reported tests at the 5% level, but the remainder reported no tests of significance - simply stating whether the results supported the supposed relationship or not.

Hedges and Olkin(1980) present three meta-analysis techniques appropriate to this situation of little information, but which are adequate to allow a meaningful thought experiment here. The three techniques differ primarily in what is assumed or observed about the level of reporting in the literature. Firstly, we can assume simply that the studies report whether they support the relationship or not (termed 'positive results') without citing statistical tests. Secondly, we can assume that the studies report whether or not the relationship is in the postulated direction using significance tests at the 5% level. Finally we can assume that both positive and negative significant results are reported in the literature. In addition Hedges and Olkin methods assume that the population effect size is the same for all studies. Here we will be making such assumptions because we have estimated the typical sample size of a diffusion study from our convenience sample of 95 studies. This estimate is then applied to the wider population of the 1840 studies concerning the 20 generalisations of interest. The only other data needed for the thought experiment are Rogers and Shoemaker's tabulation of the number of studies supporting each generalisation (1971, pp347-376). Indeed as Rogers and Shoemaker do not say whether these studies employed statistical tests or not this is the only information available without individually examining all 1840 studies. By inputting the proportion of studies supporting the relationship, together with the geometric means of the group sizes, we can compute confidence bounds for the strength of the relationship. These confidence bounds are generally wider than those obtained by other meta-analysis approaches but then the Hedges and Olkin techniques require far less information on the knowledge base. Here we also assume that all studies are effect size studies (i.e. use t tests) because this dramatically simplifies the computations, and also because the Hedges and Olkin technique has not been extended to all statistics. This

assumption places restrictions on the validity of our results, fortunately as noted above the majority of the studies in our sample used effect size measures. Finally, at the end of our analysis we convert the bounds for the effect sizes into their equivalents in terms of point-biserial correlations (we also make a minor correction to adjust these correlations to those for equal group sizes). We make this conversion because we feel most people can interpret correlations better than effect sizes.

Results

In the first column of Table 1 we list the names of the independent variables which are postulated by Rogers and Shoemaker to be related to time of adoption. We have stated these so that all are postulated to be positively related to time of adoption. We have also prefixed each with a letter indicating whether they are generalisations relating to attributes of the innovation(I), socioeconomic characteristics of the adopters(S), personality traits of the adopters(P), attitudes of the adopters(A), motivations of the adopters(M), or their integration with social communication networks(C). The second and third columns detail the number of studies which have been conducted on each generalisation (up to 1971), and the proportion of studies which support the positive relationship with time of adoption. It should be remembered that these studies cover a wide range of Fields, from rural sociology to education to consumer behaviour. The two proportions indicated with question marks are those where Rogers and Shoemaker feel there is no relationship. The fourth and fifth columns present the lower and upper 90% confidence bounds on the implied correlation between the independent variable and time of adoption assuming that the literature reports no statistical tests (a *pessimistic* assumption). Finally the sixth and seventh columns present similar bounds assuming that all studies report results at the 5% significance level (an *optimistic* assumption if the findings of our convenience sample are a guide). The 'Positive Results' columns present a depressing picture of the field with the highest upper bound being 0.10! However, we suspect that this picture is too pessimistic as the results contained in the 'Positive Significant Results' columns are more in line with those found in other areas of the social sciences. That is, persistent low correlations between theoretical variables of interest and dependent measures (Cohen, 1977). If the convenience sample is a reasonable representation of the field (with 47 out of 95 studies reporting statistical tests) then the 'truth' obviously lies between the two extremes. For the moment, and until more data are available, we will concentrate on the 'Positive Significant Results' findings. If the sixth and seventh columns are examined then it is apparent that the sub-areas of the field where most work has been done have (as would be expected) the narrowest confidence bounds. Hence we are reasonably certain about the strength of relationships for the socioeconomic(S) and social communication(C) variables, and somewhat less certain about the remaining variables. We also see that the two variables Rogers and Shoemaker thought unrelated to time of adoption probably do have significant positive correlations (complexity and age). Indeed for age we can improve the estimate since Rogers and Shoemaker report studies with negative correlations as well as those with positive correlations (1971, pp352-354). Thus we can employ Hedges and Olkin's third technique to produce a more precise confidence bound of 0.10 to 0.14 as opposed to 0.08 to 0.10 (assuming again that these are positive and negative *significant* results). It appears that earlier adopters are more likely to be older than later adopters. Another interesting aspect of Table 1 is that the personality and attitudinal variables appear equally powerful to the other measures in predicting time of adoption. Some authors have argued against generalised personality measures as useful predictors of consumer behaviour (Kassarjian and Sheffet, 1975), whilst the controversy as to whether attitudes predict behaviour is well known. The Table also suggests where more research might usefully be done. For example trialability, the ability to deal with abstractions and rationality all appear variables with reasonably good predictive power and which make good theoretical sense - but which have had

little attention in the past.

TABLE 1
 IMPUTED 90% BOUNDS ON CORRELATION COEFFICIENTS

Independent Variable	Number of Studies	% Studies Supporting	Correlations Assuming			
			Positive Results		Positive Significant Results	
			L	U	L	U
I: Relative Advantage	43	67	01	06	13	18
I: Compatibility	27	67	00	07	13	18
I: Complexity	16	56?	-02	05	10	17
I: Trialability	13	69	01	08	11	20
S: Age	228	33?	-04	-02	08	10
S: Education	275	74	04	06	16	18
S: Status	402	68	03	04	15	17
S: Larger Units	227	67	02	04	15	17
P: Empathy	14	64	-03	02	11	19
P: Less Dogmatic	36	47	-02	07	10	15
P: Abstractions	8	63	-03	08	10	20
P: Rationality	14	79	01	10	14	22
A: To Change	57	75	03	07	15	20
A: To Risk	37	73	02	07	15	20
A: To Education	31	81	04	10	15	22
A: To Science	27	74	02	08	14	22
M: Achievement	23	61	-01	05	11	18
M: Aspirations	39	74	02	08	15	20
C: Social Participation	149	73	04	06	15	18
C: Cosmopolitaness	174	76	04	07	16	19

Conclusions

It could be argued that correlations between 0.13 and 0.18 (which are the averages of the Table 1 results) are a relatively tenuous basis on which to build theory. However, it should be remembered that we are probably unable to make corrections for two other statistical artifacts, one of which would make the population correlations higher, and the other of which can have the same effect in some situations. These are the reliability of the measures and range restriction in the independent variables. Any reliability less than 1.0 in either the dependent or independent variables attenuates the correlation markedly. For example if we assumed the dependent variable (time of adoption) was relatively well measured (reliability of 0.8) but the independent less so (reliability of 0.6), and that our estimate of the population correlation was 0.14 then adjusting for attenuation the true population correlation would be 0.20. Range restriction is a little harder to assess. If diffusion studies have less variation in their independent variables than the population then the observed correlations will be reduced. Equally if they have greater variation (range enhancement) then the correlation will be increased. Range restriction is more common than range enhancement so we suspect again that the population correlations are higher than we state above. As neither reliability or range tend to be reported in past studies

we will be unable to do much more than speculate about these effects.

It should also be noted that a correlation of 0.20 provides a useful amount of predictive power. The work of Rosenthal and Rubin(1982) shows that a correlation of 0.16 yields a 58% chance of predicting earlier/later adopters correctly. A correlation of 0.20 yields a 60% success rate. So even variables accounting for a very low proportion of the variance can increase our predictive power substantially.

There is also a question of how much these results might change if we added in the studies done since 1971. Unfortunately Rogers(1983) does not update the generalisation analysis, possibly because the volume of studies has approximately doubled and it is increasingly difficult to keep track of them.

However, if experience in other areas is any guide more recent studies will not help us that much. As fields 'mature' they tend not to do the basic research exemplified by Table 1 but prefer more elaborate theoretical frameworks and sophisticated statistical analysis. Partly this is because of peer pressure for scientific 'contribution' but also it is an attempt to resolve the apparent conflict in earlier studies, or perhaps to find 'better'

predictors. If the earlier studies were done with small samples (and meta-analysts argue that small means anything less than several thousand respondents - Hunter et al, 1982) then this increasing sophistication may be misguided. Clearly diffusion research would be well served by several large scale studies using a set of well-measured independent variables. We need the set because very few studies have utilized a comprehensive list of variables, and we are therefore unsure as to the interactions between the independent constructs shown in the Table. The construction of this set can obviously be guided by theory since we have made some progress in the last 30 years. Such studies should also include the various moderator variables which have emerged in the literature. Above all they should be well-reported. This means complete details of all results (significant *and* non-significant), including means, standard deviations, correlations and reliabilities. Hunter et al(1982) contains specifications for well-reported studies - specifications which are not followed by most journals as yet.

Finally there is a little more that can be done with the past literature. Most studies do report which innovations were examined and in which cultural setting the research was conducted. The author is currently working on a meta-analytic investigation of the effects of these moderator variables - specifically on the relationship between social status and time of adoption.

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The vast literature on innovations has predominantly restricted itself to the adoption and diffusion perspectives (Gatignon & Robertson, 1985). In fact, this restricted view extends across the numerous disciplines that have examined the innovation process: rural sociology (Rogers, 1983), geography (Brown, 1981), medical sociology (Coleman et al., 1957), cultural anthropology (Barnett, 1953), economics (Mansfield, 1961), and marketing (Bass, 1969; Mahajan & Muller, 1979). The chief reason for this has been the "pro-innovation bias" of researchers (Rogers, 1983), and their tendency to classify late adopters as "laggards." This, in turn, is based on the premise that all innovations are good for the consumer and are surefire improvements over existing product substitutes. If this were indeed true, one would be at a loss to explain the high rate of new product failure in the economy (Booz, Allen & Hamilton, 1981). The problem has been compounded by the fact that, but for a handful of studies, past research has been devoted primarily to the study of the adoption and diffusion of successful innovations alone.

Innovations impose change on the consumer, and resistance to change is a normal consumer response. Not all change is necessarily healthy and resistance on its own merit may be desirable and useful (Klein, 1967; Stiles & Robinson, 1973). Some scholars have, thus, suggested that viewing innovations from the adoption and diffusion perspectives should be de-emphasized, and studying the process of innovation resistance must be given attention: "...the vast majority of people who have no a priori desire to change may be more typical and even more rational than a small minority of individuals who seek change for its own sake rather than, or in addition to, the intrinsic value of the innovations. Therefore, it is about time we paid respect to individuals who resist change, understand their psychology of resistance and utilize this knowledge in the development and promotion of innovations rather than thrust upon them preconceived innovations.." (Sheth, 1981).

More importantly, Innovation Resistance is not the obverse of Innovation Adoption. Adoption begins only after the initial resistance offered by the consumers is overcome. Thus, it is the Resistance perspective which looks at what happens to the innovation since the time it is conceived. If the resistance is too high, the innovation dies and there is no adoption. Further, resistance and adoption can coexist during the life of an innovation. Hence, it is quite important that innovation resistance per se is studied. The objective of this paper is to develop a model of innovation resistance, identify the factors that affect resistance and suggest testable propositions in this neglected perspective of innovation research.

Innovation and Innovation Resistance

At the outset, let us define innovation and innovation resistance.

At a very general level, an innovation has been defined as an "...idea, practice or object that people see as different" (Zaltman & Wallendorf, 1983). From a marketer's point of view, the definition needs to be more focussed: thus, an innovation is defined as a product which is perceived by the consumer as new. This perceived newness may be due to change(s) in just one attribute of the

product (e.g. a new shape for a wine bottle), or a radical change in the product concept (e.g. a Picturephone instead of the "voice-only" telephones). A firm may come up with an "intended" innovation - however, if the consumer fails to perceive newness, then the firm has a different problem on its hand. The lack of adoption, in this case, is not due to consumer resistance to the new product, but due to failure on the part of the firm to stimulate optimal newness. Addressing the causes for and solutions to this problem is beyond the scope of this paper. What emerges from the foregoing discussion, however, is that what is perceived to be new by a firm need not necessarily be an innovation to the consumer. Yet, every product in the market will be a potential innovation for consumers who perceive it to be so. Further, innovation resistance is triggered off only if the consumer perceives a product to be an innovation. It is from this perspective that the study of innovation resistance has been approached here.

"Resistance to change may be defined as any conduct that serves to maintain status quo in the face of pressure to alter the status quo" (Zaltman & Wallendorf, 1983) and is associated with the degree to which individuals feel themselves threatened by change. Innovation Resistance is the resistance offered by consumers to changes imposed by innovations. To the extent that consumers can suffer changes in the way they acquire information about, purchase, use or dispose of new products, innovation resistance is but a special version of resistance to change. Several theories in psychology explicitly deal with resistance to change (Newcomb, 1953; Osgood & Tannenbaum, 1955; Heider, 1958). All these theories suggest that consumers have an intrinsic desire for psychological equilibrium. Any change imposed on their behavior has the potential to disturb this equilibrium - the consumer thus more often opts for resisting the change than going through a disturbing process of re-adjustment. In other words, resistance would seem to be a normal response of consumers when confronted with innovations.

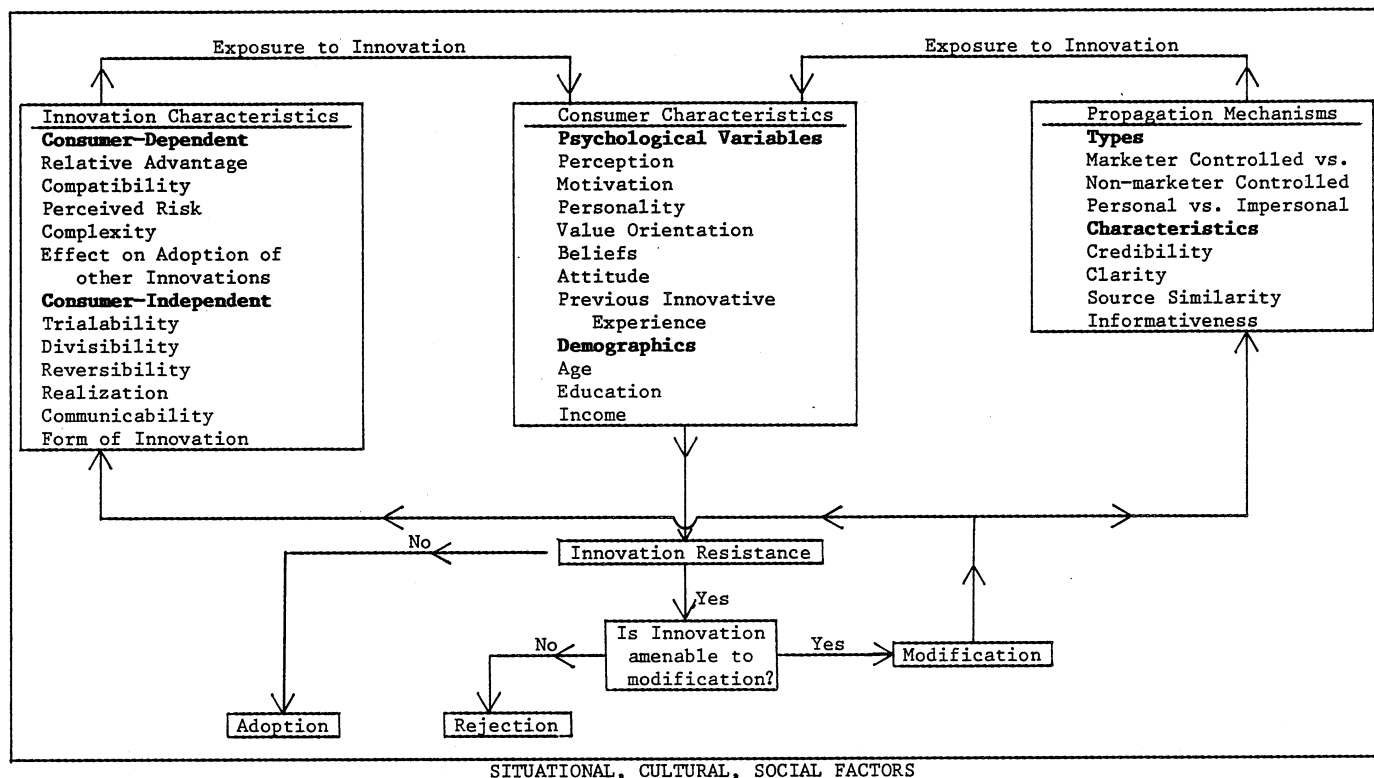
A Model of Innovation Resistance

Based on past literature, the Innovation Resistance of a consumer can be viewed as dependent on three sets of factors: Perceived Innovation Characteristics, Consumer Characteristics, and, Characteristics of Propagation Mechanisms (See Figure A).

A consumer is exposed to an innovation through direct contact with the innovation and through one or more of several propagation mechanisms. If the consumer perceives a high degree of change in using the innovation, then he resists it. If the innovation encounters consumer resistance, then it needs to be modified by the firm to suit consumer needs and reduce the resistance. The most important characteristic for an innovation to be successful is its amenability to modification. The modification to be made would depend on what caused the resistance: if the resistance was due to lack of compatibility, the modification would attempt to improve the compatibility of the innovation; if the perceived relative disadvantage caused the resistance, the modification would need to reduce this. If the innovation cannot be modified, consumer resistance cannot be overcome and it is bound to be rejected. If it can be modified, then the modification is effected and the newer version of the innovation is once again exposed to the consumer. The cycle is repeated leading to ultimate acceptance or failure of the innovation.

¹I wish to thank Jagdish N. Sheth and ACR reviewers for their comments and suggestions on an earlier draft of this manuscript.

FIGURE A
A MODEL OF INNOVATION RESISTANCE



The model of Innovation Resistance is set in the context of Cultural, Situational and Social factors, since a variation in each of these can affect Resistance. The impact of these factors is not addressed in this paper. Let us now examine how each of the three major groups of factors - Perceived Innovation Characteristics, Consumer Characteristics, and Characteristics of Propagation Mechanisms affect Innovation Resistance.

Perceived Innovation Characteristics

The characteristics of an innovation, as perceived by the consumer, determine the amount of resistance generated. Rogers (1962) has enumerated five important characteristics of an innovation: Relative Advantage, Compatibility, Perceived Risk, Trialability, and Communicability.

The Relative Advantage of an innovation may be in the form of economic gain or in the form of cost savings. The costs that are saved could be either financial, such as investment costs, or social, such as ridicule, ostracism or expulsion from peer groups (Homans, 1961). The innovation could also provide improved performance at comparatively lower costs - in other words, higher "value." If the Innovation provides a low relative advantage over existing substitutes (or, in fact, provides higher relative disadvantage), then consumers are more likely to resist it. One must note that a high cost disadvantage (say a \$100 price disadvantage) could operate differently on generating consumer resistance than a low cost advantage (a \$5 price advantage).

- P1: The higher the perceived relative disadvantage (or lower the perceived relative advantage), the higher the innovation resistance.

Compatibility of an innovation is "...the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of the receiver" (Rogers & Shoemaker, 1971). Extending this definition,

compatibility represents not only consistency with the existing values of the consumer, but also with traditional and cultural values, and with current lifestyles of the consumer. Linked to compatibility is the notion of pervasiveness. Pervasiveness of an innovation is the degree to which it relates to and requires changes or adjustments on the part of the consumer (Barnett, 1953). The higher the pervasiveness, the more the behavioral change. For example, when a manager, who is used to a personal secretary, is asked to rely on a central word-processing pool (of secretaries) for his secretarial needs, s/he is confronted with a high degree of behavioral adjustment (pervasiveness). The innovation is incompatible with the manager's current lifestyle - s/he no longer has the benefit of a flexible, one-on-one relationship with a personal secretary - and this may create resistance to the concept of the word-processing secretarial pool.

- P2: The lower the perceived compatibility (or higher the pervasiveness) of an innovation, the higher the innovation resistance.

Perceived Risk is the risk associated with adopting the innovation, and can be of several types: physical risk, functional risk (performance uncertainty), psychological risk and social risk. The level of perceived risk depends on the type of innovation. "Minor" or "Continuous" innovations (Robertson, 1971) have lower levels of perceived risk for the consumer, while "Major" or "Discontinuous" innovations threaten disruption of routine behavior and have higher levels of perceived risk associated with them.

- P3: The higher the levels of any of the perceived risk components (physical, functional, psychological or social), the higher the innovation resistance.

Trialability of an innovation relates to how easily the innovation can be tried by the consumer prior to

adoption, and impacts on the perceived risk associated with the innovation. If, for instance, a product based on an entirely new technology cannot be tried by the consumer prior to purchase, then the consumer is likely to perceive a high level of risk in purchasing the product. If, on the other hand, the consumer has a successful trial with the product, the risk associated with the product is likely to decrease. Related to trialability is the concept of divisibility of the innovation. Divisibility measures whether an innovation can be attempted in stages.

P4: The lower the trialability of an innovation, the higher the innovation resistance.

P5: The lower the divisibility of an innovation, the higher the innovation resistance.

Communicability of an innovation is the ease and effectiveness with which the results of an innovation can be disseminated to others (Rogers & Shoemaker, 1971). In the context of innovations, this would imply the ease with which the benefits of the product can be conveyed to the consumer. Communicability has two components: tangibility of the benefits from adopting the innovation, and ability of the marketer to communicate the benefits. If either or both of these components is lacking, then the innovation is likely to meet with high resistance.

P6: The lower the communicability of an innovation, the higher the innovation resistance.

The complexity of an innovation arises from two dimensions: complexity of the idea (is it easy to understand?), and complexity of execution (is it easy to implement?). Complexity has to be reduced on both these dimensions for the consumer.

P7: The higher the complexity of an innovation, the higher the innovation resistance.

Zaltman et al. (1973) have identified some other characteristics of innovations which are relevant in the context of Innovation Resistance. These are Reversibility, Realization, Amenability to Modification, and Effect on Adoption of Other Innovations.

Reversibility denotes the option that a consumer may have in terms of being able to discontinue adoption of the innovation (at least temporarily), if so desired.

P8: The lower the reversibility of an innovation, the higher the innovation resistance.

Realization is how soon the consumer expects to receive the benefits from the innovation.

P9: The lower the realization of an innovation, the higher the innovation resistance.

Amenability to Modification reflects the flexibility with which the innovation can be modified to ensure consumer satisfaction. In fact, this is the most important factor in reducing consumer resistance. If innovation modification is not feasible, the innovation may be rejected immediately.

P10: The lower the amenability to modification of an innovation, the higher the innovation resistance.

In some cases, the adoption of one innovation may have an inhibitory effect on the adoption of other profitable innovations. If this were the case, the consumer may opt out of the problematic innovation.

P11: The higher the inhibitory effect of an innovation on the adoption of other beneficial innovations, the higher the consumer resistance to this innovation.

Kelly & Kranzberg (1978) have classified all characteristics of innovations into two categories: those that are dependent on the consumer and those that are not. According to them, Trialability, Divisibility, Reversibility, and the Form of the innovation (idea, product, or process) would be consumer-independent. These factors can be expected to create the same type of resistance across all consumers. All other characteristics such as Relative Disadvantage, Compatibility etc. would be consumer-dependent, and would generate resistance depending on how each consumer perceived the innovation on each of these attributes.

Consumer Characteristics

An innovation is newness as perceived by the consumer. Thus, the resistance to an innovation is dependent on the psychological characteristics of the consumer. Some of the factors that have been identified as relevant to consumer behavior in the context of innovations are: Personality, Attitudes, Value Orientation, Previous Innovative Experience (Brandner & Kearn, 1964), Perception, Motivation (Zaltman & Wallendorf, 1983), and Beliefs (Yeracaris, 1961).

Of these factors, we have already seen how the consumer's perception of the innovation characteristics affects resistance. Unless the consumer perceives the need for the innovation, he is likely to resist it. Further, unless the consumer's perception of the innovation remains favorable both before and after adoption, he is likely to revert to resistance.

P12: The higher the consumer's perceived lack of need for the product, the higher the innovation resistance.

A second source of resistance is consumer motivation. Behaviors that are comfortable, based on "habit" (Sheth, 1981) are resistant to change. If the consumer is quite content with the current routine, and the innovation threatens to disrupt established usage patterns, then he is likely to resist the innovation. The more discontinuous the innovation, the more likely this is to happen.

P13: The more discontinuous the innovation, the lower the motivation for the consumer to adopt, and higher the innovation resistance.

The consumer's personality is a major determinant of innovation resistance. For instance, innovators or variety-seekers love innovating for the sake of the new experience and will therefore have lower resistance to new products. Personality traits such as self-confidence and dogmatism play an important role in how consumers react to innovations. For example, in the case of innovations which cannot be tested prior to purchase, consumers with lower self-confidence would rather wait until the performance of the product has been demonstrated adequately. Similarly, based on the dogmatism scale developed by Rokeach (1973), it is evident that high dogmatics will tend to be more uncomfortable, anxious and threatened by the prospect of change and will be more resistant to innovations.

P14: The lower the consumer's self-confidence, the higher the innovation resistance.

P15: The higher the consumer's dogmatism, the higher the innovation resistance.

The consumer's attitudes and beliefs determine the amount of resistance that he offers to an innovation. For example, if a consumer desires to maintain or enhance self-prestige, and believes that the innovation will be instrumental in doing so, then his resistance to the innovation will be low. Similarly, if the consumer believes that he would need to seek information from others in order to use the innovation, and that receiving others' help is an admission of inferiority (Rice, 1963; Czepiel, 1972), then resistance to the innovation will be high.

P16: The more positive a consumer's beliefs about an innovation, the lower the innovation resistance.

P17: The more positive a consumer's attitude towards adopting an innovation, the lower the innovation resistance.

The Previous Innovative Experience of a consumer also affects innovation resistance. The biasing influence of past experience that an individual brings to a present problem-solving or decision-making activity is known as "mind set," and mind-set plays an important role in shaping consumer perception and attitude formation.

P18: The more favorable a consumer's previous innovative experience, the lower the innovation resistance.

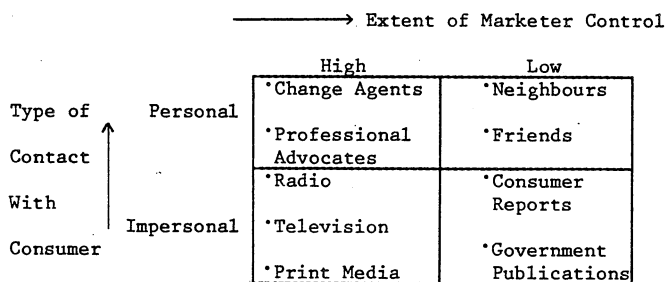
Thus far, we have seen the psychological characteristics of a consumer that affect innovation resistance. These characteristics reflect the consumer's Willingness to Innovate. However, a consumer with the willingness to innovate may not have the Ability to Innovate. The consumer characteristics which affect the consumer's ability to innovate are the demographic variables such as Education, Income, Mobility and Age. Consumers with a high willingness to adopt the innovation may not do so because it is well beyond their means or too sophisticated for them to comprehend.

P19: The poorer the ability of the consumers to innovate, the higher the innovation resistance.

Characteristics of Propagation Mechanisms

The role of propagation mechanisms in the adoption and diffusion of innovations has been extensively examined (Arndt, 1967; Manusco, 1969; Czepiel, 1972). While the effectiveness of propagation mechanisms in the case of successful innovations has been studied, the case of ineffective propagation mechanisms creating consumer resistance to innovations has been ignored.

FIGURE B
Classification of Propagation Mechanisms



Propagation mechanisms can be classified on two dimensions: the Extent of Marketer Control and Type of Contact with the Consumer (See Figure B). When the innovation is introduced to the market, the Marketer-Controlled propagation mechanisms such as advertising and testimonials play an important role in reducing consumer resistance.

As more and more people begin to use the product, propagation mechanisms outside Marketer Control such as word-of-mouth and Consumer Reports play an important role in reducing consumer resistance (Robertson, 1971).

P20: The earlier the innovation is in its life cycle, the greater the effectiveness of marketer-controlled propagation mechanisms (such as mass media) in reducing innovation resistance.

P21: The later the innovation is in its life cycle, the greater the effectiveness of propagation mechanisms not controlled by the marketer in reducing innovation resistance.

P22: Propagation mechanisms which involve direct and personal contact with the consumer (such as word-of-mouth and opinion leadership) are more effective than those which involve indirect contact with the consumer in reducing innovation resistance.

Regardless of the type of propagation mechanism, the characteristics of the propagation mechanism will have an impact on the consumer's innovation resistance (Robertson, 1971). First, the less clear the communication is to the consumer, the less motivated he will be to seek further information, and this may lead to higher resistance. Second, the less convincing the propagation mechanism is, the less likely the consumer will be to develop favorable predispositions to the innovation and higher the innovation resistance. Third, the less credible the propagation mechanism, or the lower the perceived expertise of the propagation mechanism, the less likely it is that the consumer will accept favorable messages about the innovation, and higher the resistance. Fourth, the less informative the propagation mechanism is about the innovation, the worse off the consumer is with respect to making a decision about the innovation. Finally, the higher the perceived similarity of the source (typically in propagation mechanisms involving direct contact with the consumer), the higher the attractiveness of the source, and the higher the receptivity to the information - hence, lower the innovation resistance.

P23: The higher the clarity of the propagation mechanism, the lower the innovation resistance.

P24: The higher the credibility (perceived expertise) of the propagation mechanism, the lower the innovation resistance.

P25: The higher the informativeness of the propagation mechanism, the lower the innovation resistance.

P26: The higher the perceived source similarity/attractiveness, the lower the innovation resistance.

Implications of the Innovation Resistance Perspective

Understanding the factors that drive innovation resistance of consumers has important implications for both theory development and managerial action.

From a theory development perspective, little empirical research has yet been reported on innovation resistance. It would be essential to see whether consumer resistance varies across product classes, or whether the same set of factors cause innovation resistance in similar product categories (such as durables, non-durables etc.). The notion of threshold resistance needs to be addressed.

Each consumer can be considered to have a minimum level of tolerance on each product attribute (the threshold). If the resistance due to any product attribute exceeds the threshold level, then the overall resistance to the product itself becomes very high. Once again, research needs to be directed at establishing threshold levels of resistance across the various product attributes in different product classes. Finally, the theory of innovation resistance can be linked with the theory of adoption to obtain an overall theory of innovations, which would explain the life of an innovation right from the time of its conception rather than after its acceptance. From a managerial perspective, innovation resistance is a very useful concept. First, understanding the resistance process will help marketing firms design and develop new products so as to ensure market success. The high rate of new product failure that is prevalent today can be reduced. Firms will cease innovating merely because they have access to a new technology, and will first assess the likely market resistance that the innovation will face before deciding to go ahead. Second, once firms know the underlying causes of innovation resistance, they may be able to create consumer resistance to competitive products. Third, consumer groups or activists would be quite successful in diffusing resistance among consumers to potentially harmful or hazardous innovations.

In conclusion, it is high time that consumer researchers devoted attention to a useful, yet neglected, perspective in the study of innovations. The model developed here looks at the direct effects of the three major sets of factors on innovation resistance. A more interesting aspect would be to examine the interactive effects of the factors on innovation resistance, and it is an issue that merits future study.

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Abstract

Much of the research dealing with word-of-mouth behavior was found to suffer from a lack of fit between method and the nature of phenomena investigated. To overcome this shortcoming, the present study uses graph-theoretic network analysis to examine word-of-mouth behavior in a natural environment. Word-of-mouth paths were systematically traced and a social network analysis was conducted on the word-of-mouth actors. The study demonstrates the crucial roles played by influentials and multiple group memberships in the spreading of word-of-mouth communication.

Introduction

Many studies have demonstrated the importance of WOM communication (WOM) in shaping consumers' attitudes and behaviors (e.g., Arndt 1967; Engel et al. 1969; Katz and Lazarsfeld 1955; Sheth 1971; Whyte 1954). These studies have yielded important insights into WOM behavior and have identified a significant area for research. However, traditional WOM research, as well as research on related topics such as opinion leadership (e.g., Myers and Robertson 1972; Reynolds and Darden 1971), has not been a "hot topic" in scholarly journals and symposia for well over a decade. Although some recent research has appeared (e.g., Richins 1983), interest in these phenomena has waned. This is unfortunate, as several gaps in knowledge exist in this area. These range from the relatively simple, descriptive (e.g., the number of paths of WOM comprised of senders and receivers of WOM) to the more complex, dynamic or interactive (e.g., flows of WOM within social groups and how WOM is transmitted from one social group to another to form an entire network of WOM as embedded in an overall structure of social relationships among a system's actors). The underlying reason for these deficiencies in understanding is simple. The overwhelming methodological focus in previous studies examining interpersonal topics was on sample surveys with the individual as the unit of analysis. As a consequence, the social-structural context within which WOM behavior is embedded could not be examined directly. Since WOM is an interpersonal phenomenon, however, this individualistic bias in most of the WOM research extant has resulted in only a limited understanding of this important facet of consumer behavior.

WOM: A Network Perspective

To examine WOM behavior, it is beneficial to perform a network analysis. With network analysis (Burt 1980; Knoke and Kuklinski 1982), one can examine the structure of a WOM network, the social structure of a system composed of WOM actors, and how the social structure is interrelated with the WOM network. This perspective is potentially valuable for several reasons.

First, information flows along paths that may have many links can be investigated. Reynolds and Darden (1971), Richins (1984) and Sheth (1971) have called for research examining chains of communication flow to explore questions of who shares information with whom. For example, this may be important in the determination of opinion leaders, which in previous studies was done usually on the basis of self-designated data.

Second, since a consumer's WOM behavior may agglomerate into large-scale patterns through his/her network of friends,

relatives and acquaintances, network analysis is capable of yielding direct insights into the relationship between micro-level and macro-level WOM phenomena. There is a lack of research directly examining within-group WOM behavior and how the flow of WOM travels across groups.

Third, since WOM behavior arises from the interacting individuals' social environments, the relationship between the information flow network and the social network composed of WOM actors can be accorded explicit recognition.

Method

A network study was conducted focusing on pre-decision information diffusion related to an existing service offered by one marketer. Previous research has dealt primarily with the role of WOM in the diffusion of new products or services, but there is little reason to believe that it is not important for established products or services as well (Richins 1983). Emphasis was placed on the "who-told-whom" WOM network and how this network was embedded in the social structure composed of the WOM actors. Negative WOM or feedback loops to the recommender were not investigated. The study, therefore, likely captured only a portion of the total WOM behavior, albeit an important one.

A problem encountered with the network analysis of WOM behavior is the matter of boundary specification of the system under study. Previous network analyses of interpersonal communication have primarily been conducted on closed or semi-closed systems (e.g., Arndt 1967; Rogers and Kinkaid 1981; Weimann 1983). In perhaps most consumer behavior contexts, however, WOM systems are open in the sense that set membership is initially unknown. Thus, to be able to relate the WOM network to the social network, it was necessary to conduct the study in two phases. Briefly, in the first phase more recent users of the service were asked to reveal how they learned about the existence of the service. When a respondent mentioned another person (a user or non-user), that person was contacted and asked the same question. The process was repeated until a WOM path was traced back to the marketer. The first phase, then, was employed to produce data on just the WOM network. Consistent with the criterion of mutual relevance for network boundary delimitation (Knoke and Kuklinski 1982), the network included only those social actors who were members of "who-told-whom" paths of information flow. System "closure" was obtained through complete backward tracing of WOM paths. Once the system was identified, the second phase was conducted which generated data on the social structure of the interpersonal relations among the system's WOM actors.

The study on which this paper is based was primarily exploratory in nature. The complete study is presented in Reingen and Kernan (1986). Here the overriding goals are to illustrate the network analysis of WOM behavior and to describe in detail the features of one WOM network as it arose from the network of social relationships among the WOM actors who were directly or indirectly tied to a marketer on "who-told-whom" paths. Understanding the details of a particular case may provide a foundation for more ambitious general studies. The marketer in question is a piano tuner (hereafter referred to as J), who had moved to a major Southwestern metropolitan area several years ago. Upon arrival, he developed a formal association with a music store. When the store sold a piano, J would tune it and would obtain a reimbursement from the store for his service. With the passage of time he developed his own clientele whom he billed directly. J does not engage in formal marketing communication. He considers himself "retired," but he tunes pianos to "keep myself busy."

¹The author appreciates the helpful comments by William Bearden, Jacqueline Johnson Brown, Brian Foster, Jerome Kernan, Stephen Seidman and Teresa Swartz. The support by Mr. and Mrs. Laurel Jump is especially noted.

Phase One

Data in the first phase were collected by telephone interview. Individuals who had been customers of J during the two years prior to the start of the study were sent first a preliminary notification and then were contacted by one of four interviewers with as many callbacks as were necessary to reach them. This resulted in a completion rate of 89 percent of the potential subject pool. The respondents were asked how they found out about J. When a subject mentioned another person, that person was contacted. This backward tracing was repeated until a path reach J. Data cross-checks on 18 sender/receiver dyads revealed that in only one instance was the receiver's determination of the source unconfirmed by the sender. However, three individuals mentioned as a source (one of whom had died) could not be reached. The first phase yielded 44 actors who were either directly or indirectly linked to J via WOM paths. Of these actors, 60 percent were female, 65 percent were college graduates and 53 percent were over 40 years of age.

The interview also yielded data on how long a receiver had known the source (less than several months, several months, half a year, a year, couple of years or many years--specify), how frequently they had communicated (daily, several times a week, once a week, several times a month, once a month or less than once a month), the importance s/he attached to the social relation (10-point scale), the type of social relation between them (e.g., acquaintance, co-worker, neighbor), the information received, the circumstances surrounding information transfer, experiences with the service after using it, and some demographics.

Phase Two

Toward the end of the telephone interview, respondents' cooperation with the second phase of the study was requested. Each respondent received a thank-you note for his/her participation in the first phase. The second phase was conducted by mail. A list of the names of respondents to the first phase was prepared, and the subjects were asked to identify whom they knew on the list. For each person they knew, the subject was asked to identify the duration, frequency and importance of interaction, the type of social relationship, and the types and number of various social organizations (e.g., church, music, etc.) to which they jointly belonged. They were also asked to report on when they first used the tuning service and some additional demographics.

Before mailing the questionnaire each respondent received a preliminary notification. Respondents were promised a one-dollar reward (donated to a charity of their choice) and a non-technical summary of the research. Non-respondents to the initial mailing of the questionnaire received a maximum of two follow-ups. Of the 45 actors in the WOM network (J included), responses were eventually obtained from 38 individuals, yielding a response rate of 84 percent.

Results

The major findings will be presented in three parts. First, the network of the WOM relations is described, followed by a structural analysis of the social network of the individuals involved. Finally, the WOM structure embedded in the social structure will be described.

Network Analysis of WOM Relations

Information flow paths. Figure A shows the digraph of the WOM flow of information among the 45 actors, 44 of whom are reachable from J. Informally, the digraph consists of points (i.e., actors) and directed lines indicating who told whom about the service. Of the 44 individuals directly or indirectly tied to J, only 4 (9%) were non-users of the service. Thus, in the vast majority of instances, the sender of information was a previous user. No individual reported employing more than one source. The digraph of WOM has 25 maximal paths originating at J and leading to a terminal point. There was one path (#22) with length one

(4%), 16 with length two (64%), 6 with length three (24%), and 2 with length four (8%), where length is defined by the number of directed lines on a path.

Influentials in the WOM network. Perhaps more important from a substantive viewpoint regarding the notion of opinion leadership is a simple analysis of the difference between outdegree (i.e., the number of arrows "coming out") and indegree (i.e., the number of arrows "coming in") of the actors directly or indirectly linked to J. Of the 44 individuals, 25 had a negative difference (were receivers of WOM but not senders), 14 had a difference of zero (were receivers once and senders once), and five had a positive difference (had more sender than receiver relations with others). These five individuals were actor 126 (paths #5, 6, 7, 8), 142 (paths #9, 10, 11, 12), 177 (paths #11, 12), 148 (paths #13, 14, 15, 16) and 78 (paths #18, 19, 20). They were particularly influential as transmitters of WOM information in that they were intermediate links for 15 (60%) of the paths, although they represented only 11 percent of the individuals directly or indirectly tied to J. It is noteworthy that all of these five actors were music professionals (e.g., music teachers). Although not all intermediate links who were music professionals had more sender than receiver relations, individuals possessing this attribute ($n = 7$) had significantly more sender relations than individuals ($n = 12$) not possessing the attribute ($\bar{X} = 2.57$ and $\bar{X} = 1.00$, respectively; $t = 4.27$, $p < .001$).

Information flows and relational attributes. For type of social relation between senders and receivers of WOM, 44 percent of the receiver responses indicated a friend relation, 23 percent an acquaintance relation, 13 percent a colleague relation and 8 percent a relative relation. Thus, the majority of activated ties for the flow of WOM arose from stronger (friends, relatives, colleagues), rather than weaker social relations (mere acquaintances). There was no significant relationship between the time order of ties (earlier ties with distance--length of any shortest path of which two persons are members--of one or two from J and later ties with distance of three or four from J) and these types of social relation ($\chi^2 = 2.67$, $p > .10$). Finally, a log-linear analysis was performed on the last tie ($n = 25$) and earlier ties ($n = 19$) on a path activated for WOM flow as the dependent variable and communication frequency, duration of relation and importance of interaction as the independent variables. These independent variables were employed to operationalize Granovetter's (1973) notion of tie strength which recent research suggests is related to information flows (Weimann 1983). Following the approach of Knoke and Burke (1980, p. 38), the model postulating that none of the independent variables has a significant relationship with the dependent variable could not be rejected ($L^2 = 5.11$, $p > .10$), indicating that last ties did not differ significantly in strength from earlier ties on a path.

Sociological context and WOM flows. The data indicate clearly that WOM behavior arises from and is conditioned by the interacting individuals' social environments. Some examples:

(J → 102 → 148 → 84 → 112) J and 102 go to the same church where they met. 148 gives piano lessons to 102's daughter and they were talking about getting a tuner. 84 knew that 148 is a piano teacher. They know each other well through their church. She asked 148 for advice. 84 and 112 are neighbors. 112 knows that 84 had just bought a new piano, so she asked 84 to recommend a tuner.

(J → 142 → 177 → 154) 142 is a music teacher at a local highschool. J tuned pianos at the school and 142 knows him from there. 177 was a music teacher at the same high school. 154 also teaches at that school and he asked 177 to recommend a tuner ("Since she (177) is a piano teacher, I trusted her opinion").

(J → 181) They go to the same church. 181 sat next to J in church and asked what he did. He "merely

FIGURE A

WOM NETWORK

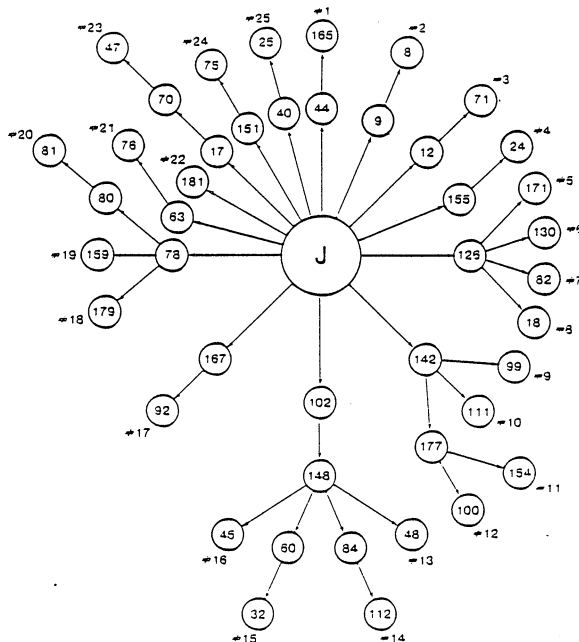
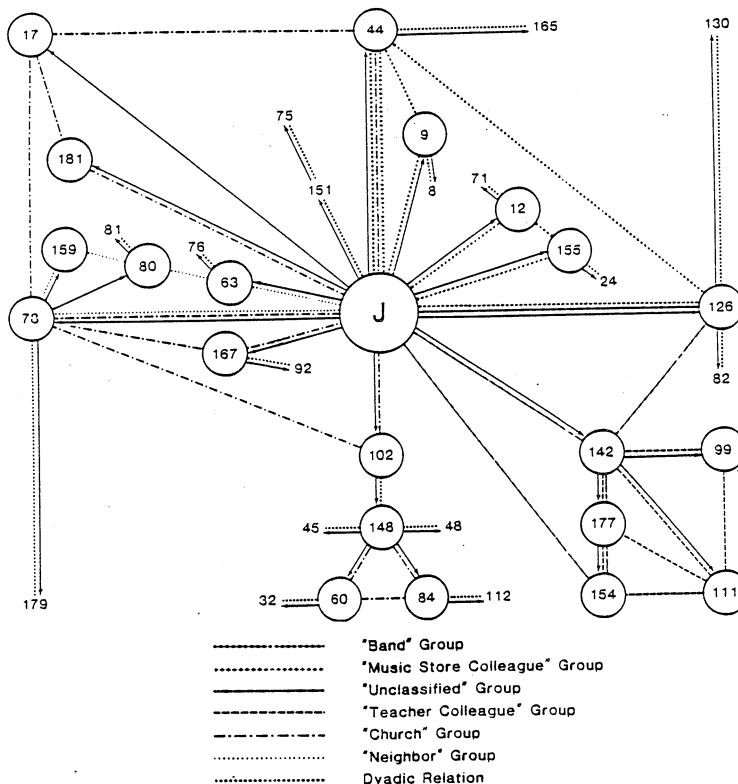


FIGURE B

WOM NETWORK IN SOCIAL NETWORK



NOTE: The WOM graph (directed lines) is mapped onto the graph of social relations (non-directed lines). To facilitate interpretation only n lines of $(n - 1)/2$ possible lines connecting n group members are shown. Numbers in circles refer to individuals belonging to groups. Numbers without circles represent individuals who are labeled isolates. The dyadic relations shown are those of WOM dyads only. The length of a line has no substantive meaning. Groups are: J, 44, 9; J, 12, 155; J, 44, 126; J, 126, 142; J, 142, 177, 154; 99, 111, 142, 177; 111, 142, 154, 177; J, 78, 102; 148, 84, 60; J, 78, 167; J, 78, 63, 80, 159; J, 78, 17, 181; and J, 78, 44, 17.

mentioned the fact (that he was a tuner), neither persuaded nor discouraged."

These examples indicate that co-membership in social organizations (e.g., neighborhood, work, church, family) appears to be important for the activation of WOM flow. This co-membership enables an individual to seek information directly from a person who is likely to possess the information needed (e.g., 148 → 84). In fact, of the 21 WOM instances that could be content-analyzed for direction, 14 (67%) were solicited from satisfied customers. However, several WOM occurrences were induced by situational or environmental cues (e.g., J → 181). Also noteworthy is that of the 10 cases involving influentials on which data for direction are available, 90 percent were solicited by receivers. Finally, many WOM flows seem to travel from one social organization to another due to a person's dual membership in them (e.g., 84 who heard about J from a church tie and who told another person through a neighbor tie). It may therefore be concluded on the basis of this brief qualitative analysis that much of the WOM behavior observed here was due to the intersection of individuals' group affiliations and the intersection of groups within the individual. More formal support for these conjectures is obtained by the following analyses.

Network Analysis of Social Structures

Overall structure. The network analysis on the 38 individuals who responded to the second phase produced 13 groups. The groups were identified with SONET-I (Foster and Seidman 1978). They consisted of at least three socially connected individuals, and any tie within a group was on a potential path for information flow. The identification of such more closely-knit "clumps" of social structure is important because it allows for a direct examination of how information travels within and across groups.

The 13 groups contained 22 (58%) of the individuals. Thus, these individuals had access to several sources of information, but (as was shown above) they employed only one of them. The remaining 16 (42%) individuals are labeled isolates (defined later). Of these isolates, 13 (81%) were in only one dyadic relation with another person, namely the sender. Their access to information was much more limited. Figure B shows the sociogram of the structure (non-directed lines). In the following more detailed presentation, emphasis is placed on those aspects of the structure of social relations which are helpful in analyzing WOM processes as embedded in the social structure.

Intersection of groups. It is noteworthy that of the 13 groups, 12 (92%) contained members who belonged to more than one group. Thus, the groups were tied together primarily by overlapping membership. Some matrix algebra is helpful in isolating individuals interconnecting groups and their joint membership in groups with other actors. This may be crucial as these individuals may spread information across groups, allowing for the emergence of larger-scale WOM patterns.

Let R be a binary matrix with k (groups) columns and i (individuals) rows, entering a 1 in the i, k th cell if and only if individual i belongs to group k . Let $X = RR^T$, where R^T is the transpose of R . The i, j th element of X gives the number of groups to which i and j both belong, and x_{ii} is the number of groups to which individual i belongs (Wilson 1982). Multiple group membership was not uniformly distributed across individuals (Kolmogorov-Smirnov $Z = 3.10$, $p < .002$). Of the 22 individuals, nine (41%) intersected groups, accounting for 33 (72%) of the total number of group memberships of 46 (i.e., the sum of the diagonal values of X). J belonged to 10 (77%) of the 13 groups and the number of memberships in groups jointly held by J and the j others was 25 or 54 percent of the total, indicating that much of the social structure was induced by the marketer himself.

Kinds of groups. Although the groups strongly overlap in membership several distinct kinds of groups can be identified on the basis of the commonality of relation that

typifies membership in them. Of the 11 groups that could be classified, five (45%) were "church" groups, two (18%) were "teacher colleague" groups, two (18%) were "music store colleague" groups, one (9%) was a "band" group and one (9%) was a "neighbor" group. Thus, the groups were tied together by some individuals with multiple membership in several kinds of groups rather than in the same kind of group. In general, WOM behavior within and between different kinds of groups may facilitate a wider spreading of information.

Structural roles. Social network participants were classified according to one of four roles. These roles are important in the understanding of the flow of WOM to illustrate how dyadic interaction aggregates to form larger-scale patterns.

Intersectors are group members who belong to more than one group (nine of the 38 individuals, 24%). In general, they may represent a cut point in the graph of social relations in that deleting an intersector and his/her associated lines may result in a disconnected graph (e.g., 126 at the 3 o'clock position in Figure B is an intersector who is a cut point). Disconnected graphs of social structure inhibit the wide-spread dissemination of information through interpersonal channels.

Bridge pillars are members of two different groups who are linked to each other (two individuals, 5%). If the line connecting such members is deleted and results in a disconnected graph, it represents a bridge between system actors. The line connecting 102 and 148 at the 6 o'clock position of Figure B is a bridge. Similar to intersectors, bridge pillars are important for linking micro-level interaction to macro-level WOM phenomena.

Members are individuals who belong to only one group but who are not bridge pillars (11 individuals, 29%; e.g., 60 at the 6 o'clock position).

Isolates are individuals with no group membership (16 individuals, 42%; e.g., 130 at the 1 o'clock position).

WOM Structure Embedded in Social Structure

Given this social structure among relevant WOM actors in the system, a rather clear picture emerges of how WOM interaction at the micro-level developed into larger-scale processes. Since there was strong overlap among groups, intersectors played a crucial role in the spreading of WOM information. Overall, 62 percent of the WOM dyads had an intersector as the sender although intersectors comprised only 24 percent of the system's actors. J was the intersector in 56 percent of these instances (13/23), followed by 142 (13%, 2/23; 4 o'clock position), 78 (13%, 3/23; 9 o'clock position) and 126 (9%, 2/23; 3 o'clock position). These four individuals represent cut points in the graph of social structure, and they alone accounted for 57 percent (21/37) of the dyadic WOM relations.

The importance of intersectors in the present study is also indicated by an analysis focusing on the four roles of social network actors specified above. WOM from intersector → member was most prominent (24%), followed by intersector → intersector (22%), member → isolate (22%), and intersector → isolate (13%). There was no member → intersector and member → member WOM occurrence. Since 15 (94%) of the 16 isolates were end points of WOM paths and since their social intergration for the system under study was low, it is not surprising that all of these 15 individuals were receivers but not senders of WOM. Thus, there was a positive correlation between number of social choices received and sender-to-receiver WOM occurrences ($r = .88$, $p < .001$). It is also of interest to note that of the previously identified five individuals with a positive difference between outdegree and indegree of WOM relations, four were intersectors (126, 142, 177, and 78) and four were cut points (126, 142, 148, and 78). Finally, although

only two individuals were bridge pillars (102 and 148), they were crucial in transmitting WOM information from one distinct group to another, thus resulting in the longest WOM paths.

Discussion

It is recognized that many of the descriptive results of the foregoing case study may be unique to the service marketer analyzed and that they represent merely an initial step in theory development. A variety of WOM networks must be examined before we can generalize about the length of paths, opinion leaders, search behavior, WOM flows within and across groups, etc., in such network structures. At a minimum, however, the study demonstrates that network analysis can yield detailed insights into complex phenomena such as WOM. Traditional research methods cannot provide the requisite relational data.

With regard to the WOM network in the present study, many paths were found, with the longest involving five individuals. Typically, the sender of WOM was a previous customer. This is consistent with Arndt's (1967) findings. Individuals relied on only one source, although many had access to multiple sources. Although only a minority of WOM instances was induced by weak interpersonal ties, weak ties were crucial in extending path lengths. The prominence of stronger ties as sources of information may have been due to several factors; for example, they may have been more readily available and more motivated to help.

In contrast to some of the previous research on WOM and opinion leadership (e.g., Belk 1971; Summers 1970), transmitters and receivers of WOM information were clearly distinguishable, and WOM was induced usually by information-seeking consumers. This divergence in findings may be due to differences in the products which were studied. For example, Belk (1971) investigated WOM behavior regarding freeze-dried coffee. For such a product, WOM conversations may be more dependent upon environmental or situational cues, and overt information search may be less prevalent. Similarly, Summers (1970) studied opinion leaders for women's fashion. He found that in most cases the traditional view held--opinion leaders offered unsolicited advice. It is less likely, however, that individuals offer unsolicited advice for services such as piano tuning. Instead, many individuals in the present study sought advice from music professionals. That music professionals were prominent sources is consistent with previous research suggesting that opinion leaders are more knowledgeable about the product category (e.g., Summers 1970).

Also important is an examination of how the network structure of WOM related to the social structure of WOM participants. Whereas WOM expanded in a linear or radial fashion in the present study, there was a rich degree of social structure among the WOM actors who were directly or indirectly tied to the marketer. This is indicated by most WOM actors belonging to groups of different kinds. Thus, most of the WOM dyads existed in groups. The vast majority of groups were linked together by overlapping members, and therefore individuals who intersected groups were found to be crucial for the spreading of WOM. These individuals transmitted WOM information to other group members or to isolates. By definition, isolates were less well integrated into the social system under study. One likely reason for this is that they were relatively more recent additions to the system as is indicated by the fact that the vast majority of isolates were end points of WOM paths (i.e., they were not senders of WOM). Group members who received information from an intersector either transmitted the information to isolates or they transmitted it to members of another group since they themselves intersected groups.

Most prominent of the individuals intersecting groups was J, suggesting that multiple membership in different kinds of groups by a service provider is important to generate marketing transactions brought about by interpersonal interaction and to stimulate WOM processes. Finally, the single instance of a bridge over which WOM information was

transmitted should not be overlooked because it resulted in the longest WOM paths with another music professional again functioning as an influential.

In conclusion, it is suggested that network analysis provides a good fit between method and WOM phenomena. The research is structurally posed in a fashion similar to that in which the target occurs (Bonoma, Bagozzi and Zaltman, 1978). Network analysis is not a panacea, however. It has problems which are potentially more acute than those encountered with more traditional methods. For example, it is evident that extra effort is required in the gathering of WOM network data, as the consequences of non-response are more severe in network analysis. Boundary specification issues and inaccurate or incomplete retrieval of WOM events from episodic memory pose additional problems which need to be addressed to capitalize on the method's potential.

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AN INVESTIGATION OF THE INTERRELATIONSHIP BETWEEN CONSUMER (DIS)SATISFACTION AND COMPLAINT REPORTS

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Abstract

The relationships between satisfaction, its antecedents, behavioral intention, and self-reports of complaint activities were examined to estimate the degree to which complaining correlates with states of dissatisfaction in an hypothesized causal structure. Results of a maximum likelihood analysis showed that the basic expectancy disconfirmation (dis)satisfaction model was supported and that complaining is related to lower levels of satisfaction, but at a relatively modest order of magnitude. The data also suggest that the relation between complaining and subsequent satisfaction and conation cognitions requires further specification.

Introduction

Consumer satisfaction as an outcome of a purchase/usage experience would appear to be an important variable in the chain of purchase experiences linking product selection with other post-purchase phenomena including favorable word-of-mouth and consumer loyalty. Conversely, the study of dissatisfaction is equally important because of its close ties to negative word-of-mouth, complaining, and other redress-seeking (e.g., Richins 1980). The present study focuses on a subset of these relationships, specifically with regard to the satisfaction-complaining linkage. This issue has been subject to some scrutiny because of its relevance to managerial strategies based on the incidence of complaining (Bearden and Teel 1983; Fornell and Westbrook 1984).

Generally, it has been found that fewer consumers complain than would be expected from expressed levels of dissatisfaction (Ash 1980; Day and Bodur 1978; Day and Ash 1979; Leigh and Day 1979). Bearden and Teel (1983) have reviewed this and other literature and find that the percent of dissatisfied individuals who complain is "discouraging" because it: (a) prevents the consumer from rectifying an unpleasant purchase experience, (b) limits firm exposure to marketplace problems, and (c) precludes effective policy-making on the basis of complaint data.

The present study was designed to further understanding of the satisfaction-complaining relationship in three areas. First, additional evidence on the magnitude of the association between satisfaction and complaining is provided. Second, a partial replication of the Bearden and Teel (1983) complaining model is reported. Third, complaining or non-complaining is related to reports of subsequent satisfaction. The first objective builds on the works of Bearden and Teel and Gilly (1981) who have provided estimates of the satisfaction-complaining relationship. Generally, they find that this parameter is on the order of -.4. The second and third objectives will be accomplished through a causal model test of the expectancy disconfirmation framework used in Bearden and Teel. This conceptualization, based on the work of Oliver (1980), posits that satisfaction/dissatisfaction is a joint function of expectations and the disconfirmation of those expectations. Satisfaction, in turn, is posited to directly affect the incidence of complaining. Complaining, in turn, is thought to affect future satisfaction through its effect on satisfaction with complaint resolution (cf. Bearden and Oliver 1985). Each of these objectives and its relevance is further elaborated below.

The Satisfaction-Complaining Relationship

Because satisfaction and dissatisfaction can be viewed as mutually exclusive locations on a satisfaction continuum

and because the act of complaining can be represented as a zero-one activity, the relation between the two constructs is easily displayed in a two-by-two table. Those cells of greatest interest are the dissatisfied complainer and the dissatisfied non-complainer categories. Note that, without base-rate data from the population, the former group gives no indication of the size of the latter. In addition, there is evidence that complainers can include satisfied customers voicing various minor concerns as well as non-consumers who perceive benefits, some fraudulent, to contacting the manufacturer (Jacoby and Jaccard 1981).

Two statistics would be helpful in summarizing the (dis)satisfaction-complaint relationship. The first is the biserial correlation between expressed satisfaction and complaining which, unfortunately, masks the satisfied/dissatisfied proportions in the population. The contingency and phi coefficients (Siegel 1956) would be more suitable for this analysis because they capture the content of the four cells in the two-by-two breakdown through their chi-squared component. Thus, large proportions of the off-diagonal satisfied complainer and dissatisfied non-complainer categories would lower the correlation to a greater degree than they might if a biserial relation were computed.

The greatest volume of data has been reported for two of the four satisfaction-by-complaint cells. These data, summarized in Day, Grabicke, Schaetzle, and Staubach (1981), show that the percentage of complaints and other channel-directed redress seeking among dissatisfied customers ranged from a low of 23% to a high of 39% over a wide range of durables, nondurables, and services. Complaints directly to the manufacturer ranged from 2.7% to 5.4%. Other estimates (Warland, Herrmann, and Willits 1975; Office of Consumer Affairs 1976; A. C. Nielsen Company 1979) are equally low and suggest that manufacturers should not rely on voluntary complaints for product feedback. Interestingly, the most frequent response to dissatisfaction in the Day et al. summary was to "do nothing." The present study will seek to corroborate these figures in a context differing from that previously investigated.

A Satisfaction-Complaining Framework.

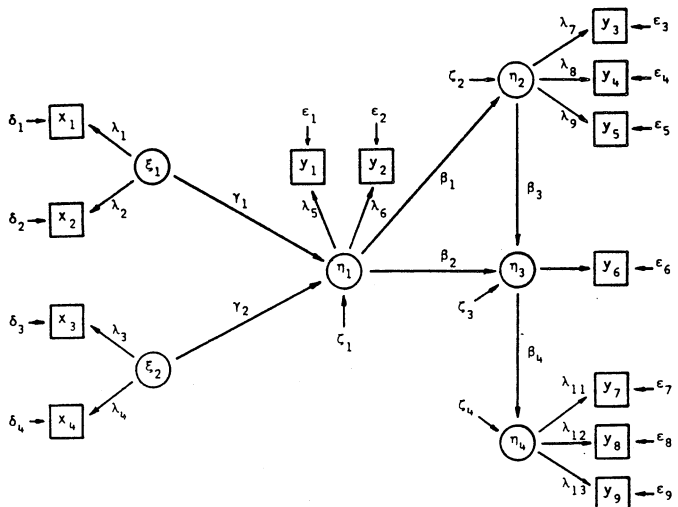
The structure tested here is based on the generally held belief that dissatisfaction is a necessary cause for complaining to occur. While many theorists would agree with the central concept that dissatisfaction is a predisposing factor for complaining, most would qualify this proposition to include other facilitating conditions involving personality, attitudinal, and demographic factors as well as situational effects (Jacoby and Jaccard 1981). Nevertheless, satisfaction can be shown to be correlated with complaining behavior in the absence of other measured factors (Bearden and Teel 1983).

The model to be tested here, following Bearden and Teel (1983) and Oliver (1980), is shown in the Figure. As is traditional in expectancy disconfirmation paradigms, initial satisfaction is shown as a joint function of expectations and the disconfirmation of those expectations. Complaining, in turn, is thought to be a function of (dis)satisfaction only. The model, as shown, deviates from prior works in that it suggests a second, post-complaining, level of satisfaction or "secondary satisfaction." This derives from Bearden and Oliver (1985) who argued that the act of complaining itself can enhance satisfaction because it increases the likelihood that redress will occur. Alternatively, it often acts as a catharsis for pent-up frustration. Bearden and Oliver

were careful to point out, however, that this applies only to direct ("public") complaining and not to complaints directed at friends and acquaintances. Finally, intention to rebuy is shown as a function of secondary satisfaction.

These relationships, which constitute the hypotheses tested in this study, are important in assessing the nomological as opposed to the simple relationship between satisfaction and complaining. If complaining and satisfaction are related, complaining should be related to the network of constructs in which satisfaction is embedded. The discussion which follows elaborates on a field setting in which a test of these hypotheses was made.

FIGURE
MODEL OF HYPOTHESIZED LISREL EFFECTS



Note: ξ_1 = expectation; ξ_2 = disconfirmation; η_1 = primary satisfaction; η_2 = complaining; η_3 = secondary satisfaction; η_4 = intention; γ_i , β_i = path estimates; λ_i = construct loadings; δ_i , ϵ_i = error in variables; and ζ_i = error in equations.

Method

Sample and Design

Subjects were all first year MBA candidates in a two-year accredited university program ($n = 107$). The students represented a diverse background with an age range of 21 to 39 and a mean of 25. One-third of the class was female and 35% had an average of 2.6 years of work experience. Of these subjects, 66 (62%) participated in the study, a response rate comparable to that of voluntary questionnaire administrations generally. The self-reported demographic data showed that there were no significant differences in the profile of respondents and the population statistics noted above.

Because of limitations imposed by the school administration, a retrospective single survey approach relating to students' experiences in the first semester of the first year was used at the beginning of the second semester. Retrospective research shares commonalities with life-history and clinical analysis approaches and is necessitated when certain pieces of data cannot be collected as they emerge. It differs from cross-sectional methods in that subjects are instructed not to respond as they feel at the present, but to reflect back on their cognitions and emotions at some prior time. Obvious drawbacks to this approach are memory fallibility and justification mechanisms where subjects distort past events to model today's outcomes. The first limitation is lessened by the fact that a four month time interval was the maximum required for any retrospective measure. The

second drawback is a more serious problem; limitations are noted in the discussion.

Measures

Focus group discussions among both first and second year MBA students as well as interviews with administrative staff connected with the program yielded a list of 27 factors thought to be important to the satisfaction of MBA candidates generally. The factors included various dimensions ranging from the quality of the faculty to the location of the university. This same list was used for the attribute measures of expectation, disconfirmation, and satisfaction.

To obtain these measures in retrospective fashion, subjects were asked to reflect back to when they entered the program and to score their expected satisfaction from each attribute on 7-point scales ranging from "expected to be very satisfied" to "expected to be very dissatisfied." The expected satisfaction approach is discussed in Oliver (1981) as a valid alternative to attribute rating scales when performance-level diagnostic data are not required. The attribute-specific expectation measure was formed as the sum of the 27 individual item responses.

An overall measure of expectation was obtained on a 12-item semantic differential of evaluative adjectives. Subjects were asked to answer the lead-in, "Last fall, I thought the MBA program would be," with responses to 7-point items such as "useful, useless," "good decision, bad decision," and "good for me, bad for me."

Attribute specific disconfirmations were measured on "better-worse than expected" scales (Oliver 1980). The 7-point descriptors ranged from "much worse than I thought it would be" through "just as expected" to "much better than I thought it would be." As with expectation, the 27 disconfirmation items were summed to form the attribute index. An overall disconfirmation measure was comprised of four summary items in "better-worse than" format. One reflected the benefits and advantages of the program, a second concerned the problems and disadvantages, while the remaining two referred to an overall disconfirmation impression.

Attribute-specific satisfaction was obtained as the sum of satisfied-dissatisfied responses to the 27 dimensions as before. Subjects were asked to respond to these questions with reference to their first semester experience and not to their feelings at the present time. An overall retrospective measure was constructed of five items recommended in Westbrook and Oliver (1981). One was a direct seven-point overall satisfaction-dissatisfaction measure, two others reflected feelings of pleasure-displeasure and happiness-unhappiness about the program, one was a %-satisfied scale, and the last was the Andrews and Withey (1976) pie scale containing varying numbers of positive (satisfying) and negative (dissatisfying) wedges. As with the attribute level scales, all overall items were worded in the past tense to reflect the prior semester's experience.

Complaining activity was obtained in a special section of the survey for those subjects who voiced complaints during the first semester. Focus group results showed that complaints were predominantly directed to either an administrator (dean or associate dean), a faculty member, or the MBA student advisor (a second year MBA selected to provide counsel to the incoming first year class). Subjects indicated their complaining activities by responding to a series of questions concerning the outcomes of complaints to either of the three entities noted above.

For a discrete set of complaint activities to be used as multiple indicators in maximum likelihood estimation, binary coding was used to represent the presence or absence of a complaint to each entity. Although no indication of the intensity or duration of the complaint

or of the ease with which it could be made is reflected in this measure, subjective reports of this nature to product dissatisfaction are the most common form of obtaining this information (Day et al. 1981; Bearden and Oliver 1985). Readers will recognize this as a limitation of the study.

Secondary or concurrent satisfaction was measured in the later sections of the questionnaire where students were asked to respond in terms of their feelings about the program now that the second semester was beginning. To insure further that students would view the second satisfaction measure as distinct from that used to reflect satisfaction during the first semester, a different scale was needed. To accomplish this purpose, Westbrook and Oliver's (1981) 12-item Likert-type instrument with reported alpha reliabilities of .75 to .96 was used. Bearden and Teel (1983) used variations on this instrument and report similarly high reliabilities. Sample items include: "I'm sure it was the right thing to enroll in this MBA program" and "This MBA program hasn't worked out as well as I thought it would."

Finally, intention was measured in a manner similar to Bagozzi's (1982) three-item "chances in ten" scale reflecting the student's willingness to reenroll for the second year. The first item was a direct "Will you reenroll...?" question. The second asked "If you had it to do all over again, would you enroll...?" The third asked "If you could enroll in another MBA program without loss of credits, would you still reenroll here?"

Alpha reliabilities were obtained for all scales as follows. Attribute and overall expectations yielded estimates of .91 and .87; attribute and overall disconfirmation yielded estimates of .89 and .91; attribute and overall satisfaction yielded estimates of .93 and .98; secondary satisfaction generated an estimate of .95; and intention resulted in a coefficient of .84. As can be seen, all estimates are in the acceptable range of .8 and above (Nunnally 1978). No estimate was calculated for the complaint index as the three complaint behaviors were discrete events and not coherent indicators.

Analysis

Jöreskog and Sörbom's (1983, Bagozzi 1980) maximum likelihood estimation technique (LISREL) was used to test the underlying causal process shown in the Figure. As opposed to OLS estimation, maximum likelihood techniques do not assume that variables are measured without error, that they are pure measures of their constructs, or that the structural equations are specified correctly.

Two problems were apparent, however, with regard to the use of this technique on the data and sample used here. The first concerned the binary coding for the complaint data. When observed variables have been measured on ordinal or nominal scales, it is recommended that polychoric and polyserial correlations be computed and estimated with unweighted least squares (ULS) in LISREL. However, standard errors are not available for this procedure. As the complaint data were binary, estimates from the ULS procedure were initially examined. Because these findings were very similar to the maximum likelihood estimates and because the latter provides standard errors and t-values, the maximum likelihood results are shown. The second problem concerned the small sample size obtained. In such cases, the chi-squared goodness of fit test in LISREL is not appropriate. Thus, as with all model tests, the fit of the model is subject to interpretation and to one's willingness to infer fit from the individual parameter estimates.

Results

Elementary Statistics

Evidence relating to the basic relationship between satisfaction and complaining is shown in Table 1. The complaint dimension was defined as either a complaint to

any of the three parties identified in the survey or no reported complaining behavior, while the satisfaction/dissatisfaction split was defined by the theoretical point of indifference on the overall satisfaction scale. The simple correlation between the two variables was $-.38$, the contingency coefficient was $-.32$, and ϕ was $-.34$. Note that all converge to approximately $-.35$ and that no estimate is particularly high.

TABLE 1

REPORTS OF COMPLAINING BY SATISFACTION/DISSATISFACTION

	Dissatisfied	Satisfied	
Complainers	16 62%* 59%	11 28% 41%	27
Non-complainers	10 38% 26%	29 72% 74%	39
	26	40	66

*The first percentage in each cell is based on the column marginal while the second is based on the row marginal.

In addition, the data show the following conditionals: The probability of a voiced complaint if dissatisfied was 62%; the probability of a dissatisfied subject given a registered complaint was 59%; and the probability of a basically satisfied student complaining was 28%. Each of these percentages compares to 1, 1, and 0 respectively if one were to take a "purist's view" of the satisfaction-complaining relationship.

Model Relationships

The 78 subdiagonal correlations on which the model estimates are based are available on request and are not shown here due to space restrictions. Generally, the attribute and overall measures of the expectation, disconfirmation, and satisfaction measures are highly correlated as one would expect. The complaining index components were negatively and significantly correlated ($p < .01$) with satisfaction as hypothesized and were correlated to a lesser extent ($p < .05$) with secondary satisfaction and two of the three intention indicators. Finally, the intention indicators were highly correlated ($p < .01$) with secondary satisfaction as hypothesized.

The LISREL results corresponding to the measurement model in the Figure are shown in Table 2 while the results for the structural model are shown in Table 3. The data show that all non-constrained elements were significantly related to their constructs. (The constrained elements were selected to be the most significant.)

The LISREL path estimates in Table 3 show that all structural parameters in Figure 1 were supported with the exception of β_3 indicating that secondary satisfaction was not statistically related to the extent of complaining behavior although the coefficient was in the expected direction. The remaining paths were supported as hypothesized. As shown in Bearden and Teel (1983) and Oliver (1980), satisfaction is a function of both expectation and disconfirmation. Very high coefficient estimates were also obtained for the satisfaction-secondary satisfaction and secondary satisfaction-intention paths.

The resulting chi-square value of 108 ($df = 60$, $p < .01$) does not permit one to reject significant differences in the residual matrix. However, Jöreskog and Sörbom (1982) note that chi-squared is an appropriate statistic only when all observed variables are multivariate normal, when the analysis is based on the covariance matrix, and when the sample is fairly large. Because these conditions did not apply here, only the individual structural equations

are examined. Specifically, the squared multiple correlations were very high for primary satisfaction ($R^2 = .917$), secondary satisfaction ($R^2 = .880$), and intention ($R^2 = .826$). As was evident from the earlier analysis of the complaining relationships, the complaint construct was not predicted well ($R^2 = .162$). Thus, it appears that the satisfaction elements of the model were adequately specified whereas complaining was not.

TABLE 2

PARAMETER ESTIMATES FOR THE MEASUREMENT SUBMODELS

Parameter	Estimate	Std. Value	t Value
λ_1 : Overall Expect.	1.000 ^a	.787	-
λ_2 : Attribute Expect.	.942	.741	3.930 ^b
λ_3 : Overall Disconf.	1.000 ^a	.951	-
λ_4 : Attribute Disconf.	.938	.892	12.429 ^b
λ_5 : Overall Satis.	1.000 ^a	.971	-
λ_6 : Attribute Satis.	.922	.894	15.398 ^b
λ_7 : Complaint (Adm.)	1.000 ^a	.634	-
λ_8 : Complaint (Rep.)	.811	.514	3.155 ^b
λ_9 : Complaint (Fac.)	1.238	.785	3.436 ^b
λ_{10} : Secondary Satis.	1.000 ^a	.989	-
λ_{11} : Intention (Direct)	.661	.623	5.992 ^b
λ_{12} : Intention (Again)	1.000 ^a	.943	-
λ_{13} : Intention (Trans.)	.890	.839	10.464 ^b

^aConstrained Value

^b $p \leq .01$

TABLE 3

PARAMETER ESTIMATES FOR CAUSAL PATHS

Parameter	LISREL Estimate	Standardized Value	t Value
γ_1	.361	.293	3.738 ^a
γ_2	.931	.912	13.800 ^a
β_1	-.262	-.402	2.502 ^a
β_2	.991	.973	16.683 ^a
β_3	.151	.097	1.469
β_4	.867	.909	13.884 ^a

^a $p \leq .01$

DISCUSSION

With regard to the relationship between satisfaction and complaining, the study findings reveal that the proportion of complainers (41%) was a fairly accurate estimate of those dissatisfied (39%), although these two groups were not comprised of the same subjects. The data revealed that the overlap between the two groups was 60%. This lower than anticipated degree of overlap is mirrored in the correlations obtained between satisfaction and complaining. Depending on the metric assumptions used, they range between $-.32$ and $-.38$. This compares to $-.39$ and $-.43$ in Bearden and Teel (1983), and $-.38$ in Gilly (1981). If one loosely aggregates these estimates, it appears that correlations in the $-.35$ to $-.40$ range appear typical. Taken one step further, this would imply that something on the order of 15% of the variance in complaining is explained by satisfaction/dissatisfaction.

A second issue involved the nomological validity of the complaining construct. This is best answered in the path analysis reported here. The LISREL results demonstrated that complaining was indeed related to primary

satisfaction when viewed in terms of observable variables and multiple indicators. However, the findings also show that the act of complaining was not related to secondary satisfaction nor was it related to intention in a second LISREL run incorporating a direct path from η_2 to η_4 . This latter analysis is not reported here because the results were nearly identical to those discussed.

Implications

The implications of the findings fall into the areas of theory and practice. Theoretically, much more work on the complaining construct is required before meaningful statements concerning this phenomenon can be made. Two observations are apparent from the low degree of shared variance between satisfaction and complaining. First, satisfaction and dissatisfaction probably have many other forms of behavioral response which would not be classified within the complaining category. Day and his colleagues (1981) and Jacoby and Jaccard (1981) have explored this suggestion more fully. Day, in particular, has delineated the many variations (or agenda) of consumer response to dissatisfaction. His studies have shown consistently that complaining is not the modal response category.

Secondly, it is apparent that satisfaction/dissatisfaction is not a sufficient condition for complaining to occur. Indeed, Jacoby and Jaccard (1981) argue that it may not even be necessary. Day (1983) has recently presented a fairly exhaustive set of conditions for the complaint response. These include dissatisfaction or inequity, causal attributions, search for channels, economic and psychological costs and benefits along with their respective subjective probabilities, alternative evaluation, and an action decision. Thus, the ease with which a complaint could be made, although not investigated here, should be an important component of future works. Until a more extensive study involving these suggested antecedents of complaining is made, explained variance estimates of 15% will probably not be exceeded.

The practical implications are more problematic. Because of the wide variation in dissatisfaction and complaining rates across product categories, any estimate of normal complaining must be done on a product by product basis. Thus, the results reported here are only suggestive of what interpretations others may apply to complaining activity.

At the very least, it should be apparent that not all dissatisfied consumers complain not are all complainers dissatisfied. In fact, the available commercial data reported earlier (e.g., A.C. Nielsen 1979) suggest that most companies are confronted with a "tip of the iceberg" problem. And this should be more true to the extent that the market is homogeneous, the product category is low priced, channel members are willing to absorb and "bury" returns and complaints, and "third party" options are available.

Limitations

Although this study was intended only to be suggestive of approaches to the dissatisfaction-complaining relationship, a number of cautionary observations and some very real limitations of the research must be discussed. Perhaps the overriding shortcoming was the design imposed by the research environment. A retrospective investigation is suspect on a number of points. Problems of subject recall, rationalization, and distortion are somewhat unavoidable. While a design of this nature is seemingly different from a concurrent study in that subjects are asked to reconstruct a temporal ordering of events, the responses obtained are, in all likelihood, more logically connected than they would have been had a true longitudinal design been employed. It should also be noted that the responses obtained here are time-dependent and perhaps may have varied had another time of administration been used.

The validity of the complaining criteria are also suspect. Self-reported behaviors, particularly of a sensitive nature, must also be viewed with a degree of caution. Unfortunately, corroborative reports of actual complaints to faculty and administrators were not available for reasons familiar to most readers.

The response rate, although not unusually low, posed two problems which limit the generalizability of the findings. Specifically, no attitudinal nor complaining data were available for the 41 non-respondents. Thus, no analyses of the satisfaction-complaining relationship for this group could be performed. In fact, the true proportions of dissatisfied subjects and complainers could not be determined and the estimates reported here could seriously under- or overstate these levels. A second limitation resulting from the response rate obtained is the inability to perform a cross-validation. Split-sample techniques would have yielded very unstable estimates given the small n involved. As a result, further replications of the current approach will be needed.

Summary

The basic relationship between satisfaction and complaining was tested within an empirically based satisfaction framework. Although a moderate correlation between satisfaction/dissatisfaction and complaining was found, the complexity of the relationship was underscored by the fact that complaining was not related to secondary satisfaction or intention in multivariate mode. This supports the contention of Day (1983, Day et al. 1981) and others that dissatisfaction has many manifestations other than complaining and that the antecedents of complaining are much more involved than dissatisfaction alone. Researchers are encouraged to approach the complaining construct with much more sophisticated representations than have been used to date.

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COMPLAINT BEHAVIOR: ANALYSIS BY DEMOGRAPHICS, LIFESTYLE, AND CONSUMER VALUES¹

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Abstract

The area of complaint behavior has received considerable attention recently from consumer researchers. However, a neglected approach to the study of complaint behavior has been in investigating the values which complainers bring into the marketplace. The present study attempts to delineate these values in addition to lifestyle and demographic variables. Patterns of differentiation between complainers and non-complainers are presented and implications are discussed.

Introduction

Consumer complaint behavior continues to be an issue of importance to marketers. Inherently, complaint behavior involves a negative response on the part of the consumer, or as Jacoby and Jaccard (1981, p. 6) define it, "action taken by an individual which involves communicating something negative regarding a product or service to either the firm manufacturing or marketing that product or service, or to some third-party organizational entity." Day et al. (1981) suggest that consumer dissatisfaction may have far-reaching implications such as brand switching or store boycotts. Historically, complaint behavior has been analyzed in terms of consumer demographics (e.g., Miller 1970; Liefeld, Edgecombe, and Wolfe 1975; Pfaff and Blivice 1977) while more recent research suggests that complaint behavior is a function of both characteristics of the individual and the situation (Moyer 1985; Beardon and Crockett 1981; Wall, Dickey, and Talarzyk 1979).

Although several studies have focused attention on the importance of consumers' "inner states" or "internal influences" in relationship to complaining (Zaichkowsky and Liefeld 1977; Wall, Dickey, and Talarzyk 1977) a neglected approach has been to investigate the values which the complainer brings into the marketplace. Values, as defined by Kluckhohn (1951), are concepts of the desirable which influence selection from available modes, means, and ends of action. Early attempts to relate the study of human values to marketing were done by Rosenberg (1956) and Yankelovich (1964). More recently, research has focused on utilizing personal values as a basis for market segmentation (Scott and Lamont 1970; Vinson, Munson, and Nakaniski 1977; Vinson, Scott, and Lamont 1977; Munson and McIntyre 1979). The purpose of the present study was to investigate not only the demographic and lifestyle variables associated with complaint behavior, but, in addition and most importantly, to analyze the values of those that are most likely to complain in the marketplace. The hypothesis for the study was that there would be differences in values, lifestyles, and demographics between complainers and non-complainers in relationship to apparel products.

Method

Subjects

A sample of 702 women residing in the state of Illinois who met the criterion of having at least one child under 18 years of age was drawn on the basis of a self-weighted systematic probability sample of

households in the state of Illinois. With this sampling procedure, each of the residence telephone numbers in the state had an equal or known probability for inclusion in the survey. Random digit dialing was used in the Chicago SMSA to eliminate selection bias of listed over unlisted numbers. Since the proportion of unlisted numbers in downstate areas is not of sufficient size to significantly bias the sample, systematic selection procedures of every *n*th number were used, yielding an equal probability sample of all numbers in current Illinois telephone directories outside Chicago (Moser and Kalton 1972, p. 195). Statistically this sample provided data at the 95% level of confidence within a maximum sampling error of 3.5%. Of the 702 women in the sample, 607 completed interviews were obtained, yielding an 87% response rate.

Respondents in the sample had a mean age of 36 years with 13.2 years of schooling. About 45% of the mothers had a high school education and 39% some college education. They were married (83%) and primarily in first marriages (74%) of about 10 years' duration. Many of them (42%) were not employed, but 36% were working full time and 22% were part-time workers.

Measures

Variables included in the study consisted of three major groupings: (1) demographics, (2) lifestyle variables, and (3) consumer values in relationship to apparel products. The demographic variables consisted of age, household income, educational level, race, respondent's employment status, and family type (single parent, dual earner, traditional). Ten items from the Stanford Research Institute study of American Lifestyles (Mitchell 1983) were utilized as the lifestyle variables. These included questions about family life, social status, and money and each was measured on a four-point agree, disagree scale. A four-point scale, rather than the conventional five-point scale, was utilized because of the ease by which it could be administered on the telephone and to encourage subjects to take a stand on the dichotomies through using a forced choice format rather than allowing a neutral stand.

Consumer values based on Stampfl's (1982) consumer value typologies constituted the apparel value variables. Value orientations of quality, quantity, want, need, fashion, aesthetics, and functionality were studied and defined according to Table 1. One four-point Likert scale (strongly agree, agree, disagree, and strongly disagree) question was developed for each value for the product category of apparel. Apparel was chosen as the product category under study because of the frequency with which it is purchased and the possibility of product dissatisfaction. Each of the questions was validated by a panel of ten experts to ensure that the question developed measured the definition as stated. The experts were university professors from the School of Human Resources and Family Studies at the University of Illinois who were familiar with the assessment of products for consumer use. Overall, there was 67% agreement among the experts that the questions developed measured the definitions as stated. Complainers were defined as those subjects that agreed or strongly agreed with the statement "If I buy clothes I am not satisfied with, I take them back to the store and complain." Non-complainers were defined as those that disagreed or strongly disagreed with the statement.

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TABLE 1
DEFINITIONS OF VALUES

Quality - Selection Based on Perceived High Standards or Excellence
Quantity - Selection Based on Maximizing the Amount or Number of Products
Want - Selection Based on Impulse Buying or Desires
Need - Selection Based on Planning and Discernment of Necessities
Fashion - Selection Based on the Newness of the Style or Product
Aesthetics - Selection Based on the Sensory Pleasingness of the Product
Functionality - Selection Based on a Fundamental Need such as Warmth, Health, or Comfort

Data Collection and Analysis

A pretest consisting of 35 interviews was conducted by professional telephone interviewers. Questionnaire revisions and an estimate of the average time required to administer the interview schedule resulted. Following the pretest, 609 telephone interviews were obtained by trained professional interviewers. All interviews were conducted in the evening during the week and during the day over weekends in order to facilitate contact with persons holding jobs. Up to ten attempts were made to conduct an interview, at a given telephone number, before it was considered a noncontact. At least 10% of the completed interviews of every interviewer were verified by telephone, either by the supervisors or by interviewers specifically trained for this purpose. Analysis of variance, Scheffé post-hoc comparisons, and t-tests of mean differences were utilized to compare differences between complainers and non-complainers.

Results

Analysis of variance and Scheffé post-hoc comparison tests (Table 2) revealed that higher income and better educated consumers were significantly more likely than lower income and less educated consumers to agree with the statement "if I buy clothes I am not satisfied with, I take them back to the store and complain." Other demographic variables such as age, employment status, and family type did not reveal significant differences.

Two lifestyle variables (Table 3) revealed differences in complaining behaviors. Those in strong disagreement with the statement "I prefer to be different rather than to do things the way other people do" were significantly less likely than those in strong agreement to take merchandise back to the store and complain when dissatisfied. In addition, those consumers that disagreed with the statement "a woman can work outside the home even if she has small children and still be a good mother" were least likely to complain when dissatisfied with apparel products. Lifestyle variables such as the importance of the family, choice of entertainment, and sexual attitudes did not reveal additional differences.

Utilizing t-tests of mean differences, the consumer values of complainers (those agreeing or strongly agreeing with the statement "if I buy clothes I am not satisfied with, I take them back to the store and complain") were compared with those of noncomplainers (those disagreeing or strongly disagreeing with the statement "if I buy clothes I am not satisfied with,

TABLE 2

SCHEFFÉ POST-HOC COMPARISONS ON DEMOGRAPHIC VARIABLES IN RESPONSE TO THE STATEMENT "IF I BUY CLOTHES I AM NOT SATISFIED WITH, I TAKE THEM BACK TO THE STORE AND COMPLAIN."

Variable	Mean ^a	Number
Household Income		
Above \$35,000	2.25	217
\$20,000-\$35,000	2.34	159
Below \$20,000	2.41	147
Education		
Above 14 years	2.19	135
13-14 years	2.34	138
Below 13 years	2.35	316

^aA mean of one signifies "strong agreement" and four signifies "strong disagreement" with the statement "if I buy clothes I am not satisfied with, I take them back to the store and complain."

^bEnclosed boxes indicate significantly different subsets at the .05 level. For example, those with household incomes of above \$35,000 and \$20,000 to \$35,000 were not significantly different from each other and, therefore, share an enclosed box. Those with incomes above \$35,000 and below \$20,000 were significantly different from each other in response to the statement and, therefore, do not share an enclosed box.

I take them back to the store and complain"). Results as reported in Table 4 indicate that when purchasing apparel, complainers were significantly more likely than non-complainers to value aesthetics over fashion, functionality over aesthetics, and want over need. Thus, even the value orientations which complainers bring into the marketplace appear to be different from those of non-complainers.

Discussion

The results of the study indicate that demographic, lifestyle, and value differences between complainers and non-complainers do exist. The two demographic variables found to be significantly characteristic of complainers in this study (household income and education) tend to be consistent with previous research findings (e.g., Miller 1970; Liefeld, Edgecombe, and Wolfe 1975; Pfaff and Blivice 1977). This finding corroborates past results that complainers tend to be the most highly and financially successful segments in the marketplace. Due to their relatively high educational levels, they may be more aware of alternative modes for gaining satisfaction such as calling the Better Business Bureau, etc. Retailers might, therefore, recognize that complainers tend to be the most powerful segments in terms of success for their businesses by providing them with satisfactory goods. It is recommended that retailers handle complaints in such a manner that these more highly educated consumers

TABLE 3

SCHEFFÉ POST-HOC COMPARISONS ON LIFESTYLE VARIABLES IN RESPONSE TO THE STATEMENT "IF I BUY CLOTHES I AM NOT SATISFIED WITH, I TAKE THEM BACK TO THE STORE AND COMPLAIN."

Variable	Mean ^a	Number
"I prefer to be different rather than to do things the way other people do."		
	b	
Strong agreement	2.15	102
Agreement	2.33	333
Disagreement	2.37	121
Strong disagreement	3.25	4
"A woman can work outside the home even if she has small children and still be a good mother."		
Strong disagreement	2.00	20
Agreement	2.29	294
Strong agreement	2.31	207
Disagreement	2.47	57

^aA mean of one signifies "strong agreement" and four signifies "strong disagreement" with the statement "if I buy clothes I am not satisfied with, I take them back to the store and complain."

^bEnclosed boxes indicate significantly different subsets at the .05 level. For example, those in strong agreement, agreement and disagreement with the statement "I prefer to be different rather than to do things the way other people do" were not significantly different from each other in response to complaining and, therefore, share an enclosed box. Those in strong disagreement with the statement were significantly different from all others and, therefore, do not share an enclosed box.

TABLE 4

T-TEST OF MEAN DIFFERENCES BETWEEN COMPLAINERS AND NON-COMPLAINERS ON CONSUMER APPAREL VALUES

Value	Mean ^a	Probability
Aesthetics over Fashion		.005
Complainers	3.13	
Non-complainers	3.04	
Aesthetics over Functionality		.036
Complainers	2.05	
Non-complainers	2.15	
Need over Want		.020
Complainers	2.40	
Non-complainers	2.52	

^aA mean of one signifies "strong disagreement" and four signifies "strong agreement" with the value preference.

do not take the complaint "out the door" and to another party.

These findings also suggest that not only may complainers be more "verbal" but they also may possess greater economic clout due to their higher income status. Of all customers, this is the customer the retailer should be most concerned about not alienating. It, therefore, becomes even more imperative that the retailer deal with the complaint in a satisfactory manner. In many ways it is fortunate that the more verbal, higher income complainer gives the retailer an opportunity to "repair the damage done." Retailers need to view the complaint as an opportunity to regain customer loyalty rather than another irritation or problem. Salespersons (who are most likely to be the ones to interact with complainers) need to be thoroughly trained to effectively and positively deal with complaints. A "no questions asked" return policy simply may not be good enough anymore. Salespersons need to attempt to professionally restore a damaged relationship between the retailer and the customer. The importance of effectively dealing with the complaints of the higher income, better educated consumer takes on increased importance when it is realized that these customer segments will continue to grow due to maturation of the baby boom generation and dual-wage earner families.

Complainers were further distinguished from non-complainers on lifestyle variables. Those consumers who prefer to be different rather than to do things the way other people do them tended to be complainers. This may indicate that the complainer values uniqueness, individuality or a sense of independence. In fact, this lifestyle perspective may be a key ingredient in allowing the consumer the freedom to complain. Apparently, this consumer is not afraid of being different (in fact, rather enjoys it) and may transfer this attitude into the realm of shopping behavior. Perhaps, to this consumer, complaining represents a sense of being "different." If this is true, the act of complaining may be in itself a form of positive reinforcement.

The present study also sheds light on the personal consumer values that the complainer brings into the marketplace. For the product category of apparel, complainers tended to value functionality or practicality over aesthetics, and aesthetics over fashion or product newness. Thus, the complainer's "hierarchy of values" tends to be more oriented toward practicality and least oriented toward fashion newness. Apparently the complainer's desire to be "different" as discussed previously does not include a desire to be different based on fashion newness. Rather, practicality in dress is stressed. Although at first this may appear to contradict the "desire to be different" in many ways, it coalesces in the image of the practical, rugged, independent "New Englander" type. Movie and television stars such as Katherine Hepburn and Angela Lansbury fit the stereotype well--bright, articulate, simplistically practical, and fiercely independent. Although retailers may find the need for "practical" clothing terribly boring, the present study suggests its importance to one segment--that of the complaining segment. The success of such retailers as L. L. Bean with their emphasis on high quality "practical" clothing leaves one to speculate on the profitability of selling "practical" clothing.

It is recommended that future research addresses some of the issues and concerns raised in the present study. For example, to what extent is complaining a positively reinforcing behavior for certain individuals? For which individuals is complaining reinforcing? How and why has complaining behavior been learned? Another mode of research might experimentally manipulate

various means by which salespersons handle customer complaints. Are complaints made by bright, articulate customers best handled by bright, articulate salespersons? Or would an opposite personality approach work better? A research study which investigates the intergenerational transfer of complaining behavior within the family might prove to be most interesting--for all we know the kids just might be doing what they saw done!

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DIFFERENCES IN ORGANIZATIONAL RESPONSES TO CONSUMER LETTERS OF
SATISFACTION AND DISSATISFACTION

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Abstract

A limitation of existing research in the area of consumer satisfaction and dissatisfaction is its almost exclusive emphasis on adult behavior. Yet, children also experience satisfaction and dissatisfaction. They purchase products, and certainly by their preteen years, they understand on a basic level how the market system operates and how to react when it does not operate fairly. The present study examines corporate responses to unsolicited letters from adults and children expressing either praise or complaint regarding a company product. Particular attention is paid to the comprehension level of corporate communications. Intriguing, if tentative, insights are revealed.

Introduction

You send out letters,
you get back letters,
that's for sure.

--Lazlo Toth

For many Americans, the 1970s were turbulent years. The political climate was marked by distrust and disillusionment. Economically, the country faced high inflation, high unemployment, and ultimately recession. Ecological concerns abounded. Exposés of unscrupulous business conduct led consumers to call for more social responsibility on the part of private industry. In short, the time was ripe for activism.

Enter Lazlo Toth, fictitious champion of absurd causes. Through the pen of writer/comedian Don Novello, Mr. Toth corresponded with America's highest corporate and government officials. In some cases, he voiced a complaint; in many cases, he expressed support; in all cases, he made a humorous statement about the nature of communication between individuals and institutions.

In reality, The Lazlo Letters (Novello, 1977) probably did little to create a positive attitude among companies regarding consumer communications. As Landon (1979) noted, businesses in the late 1960s and early 1970s commonly believed that "consumers who write complaint letters are cranks and weirdos." These companies cited the small number of complaints as proof that complainants were eccentric and exceptional. This, in turn, provided justification for the lack of a consumer affairs unit in the organization.

The activist 1970s, however, witnessed a dramatic growth in the number of consumer communications, with increases of up to 30 percent a year (Landon, 1979). According to Blum, Stewart and Wheatley (1974), as the amount of negative correspondence rose, so did other, more positive types of communication.

In response to this trend, researchers began to systematically investigate the area of consumer satisfaction and dissatisfaction, amassing a sizeable body of literature over the course of 15 years. Robinson (1979), in a review of this research, noted the historical emphasis on the consumer. Studies have examined characteristics of complainers, theoretical bases of satisfaction, causes of dissatisfaction, and ways to measure the outcome of purchase decisions.

A second orientation has focused more on the business aspects of complaining behavior. Included in this research stream are subjects such as the incidence and

type of corporate response and the function of consumer affairs departments within the organization.

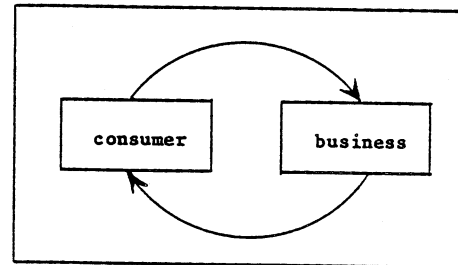
Resnik and Harmon (1983) suggested that a limitation of existing research is its separate treatment of consumer and managerial points of view. Communication of satisfaction or dissatisfaction is an exchange process, involving some sort of interaction between the consumer and the responsible party. Landon (1980) enumerated the steps in this process:

1. The consumer evaluates the outcome of a purchase decision in the form of satisfaction or dissatisfaction.
2. The consumer decides whether to make this outcome known to the company.
3. A communication is then transmitted to the company.
4. The company responds to this communication in the form of various types of action.
5. Finally, the consumer evaluates the response and decides on further action, if any.

Rather than focus on one party in the communication process, the present study examined the interaction between these parties, as suggested in Figure 1. We took as a point of departure the decision to communicate satisfaction or dissatisfaction to the company (step 2). With that in mind, the study examined the last three steps in the communication process.

FIGURE 1

THE EXCHANGE PROCESS IN COMMUNICATING
SATISFACTION/DISSATISFACTION



Children and Adults as Communicators

Virtually all published research on complaining behavior has centered upon adult consumers as opposed to children. Perhaps this is because adults are more likely to make purchase decisions and, by extension, more likely to evaluate the outcome of purchasing acts. Then, too, a certain level of intellectual development is required to 1) understand how the market system operates, 2) judge the worth of products, 3) assign responsibility for product performance, and 4) articulate satisfaction or dissatisfaction to the responsible party.

Admittedly, there is a wealth of literature on the acculturation of children into the marketplace. Studies have examined how children acquire, structure, interpret, and use information, particularly mediated information.

We know something about children's spending and saving behavior, and even more about their purchase requests and parental yielding. But researchers invariably treat the purchase decision as the last stage of the children's consumer behavior process. We could find no study which took the outcome of the purchase decision as a beginning point in examining children's satisfaction and dissatisfaction behavior.

There are several reasons why children's post-choice behavior is important. For one thing, children exert considerable influence in the buying process. They make direct requests both at home and in the store, asking for items by brand name as early as kindergarden (Ward et al., 1977). They also purchase many products themselves. Weekly allowances are fairly typical as early as age five or six. By their preteens, young people often are working at odd jobs to increase their discretionary income.

To what extent do children evaluate the outcome of their purchase decisions? According to Gesell et al. (1977), they begin to judge some products as "a gyp" by the age of seven; by the age of ten, their sense of what is good and bad is fairly well established. Further evidence of the development of evaluative skills comes from Ward et al. (1977). They found that 2/3 of third graders and 3/4 of sixth graders in their sample had negative experiences with products.

It seems reasonable to assume that by their preteen years, children understand on a basic level how the market system operates and how to react when it does not operate fairly. In fact, Robinson (1977) has suggested that "[adult] complaint action may be a function of personal values acquired in childhood." If that is the case, then the positive and negative experiences children have with products may have an impact on their adult consumer behavior.

Purpose

The purpose of this study was to examine the nature of organizational responses to unsolicited letters of satisfaction and dissatisfaction from both children and adults. Special attention was paid to the comprehension level of business communications--that is, the extent to which the corporate message could be understood by its intended recipient.

Three major research questions were addressed:

1. Do companies respond differently to unsolicited letters of praise versus complaint?
2. Is there a difference in company response to communications from children versus adults?
3. How do children comprehend corporate communications?

Methodology

Seventy-two letters were sent to consumer goods manufacturers in reference to the performance of one of the firm's products. The letters varied along two dimensions. One half were written from the perspective of a child; the rest were written from the perspective of an adult. Half of the letters expressed satisfaction with the product, while the remaining half indicated consumer dissatisfaction.

The letters were constructed explicitly for this project to ensure uniformity of content. Each communication included the following general pieces of information:

- identification of letter writer;
- purpose of letter;
- reason for satisfaction or dissatisfaction;
- request for some reply.

As part of the identification process, the letters from children stated the age of the letter writer (12 years old). The letters from adults stated the writer's occupation (professional), in lieu of age.

Obviously, a letter written by a child will vary from that written by an adult in terms of legibility, wording, abstractness of ideas, organization, and general writing style. To ensure that companies would recognize the age differential, we had 12-year-olds actually write the children's letters. The only guidelines we placed on the content were that the four pieces of abovementioned information (identification of letter writer, etc.) be included.

The project spanned a total of six consumer goods categories, three of which were food related (cereal, pizza, snacks), and three of which were not (shampoo, cosmetics, clothing). Within each product category, three firms were examined to enable both within- and across-industry comparisons. Effort was taken to select product categories with applicability to both adults and children in at least the seventh grade (e.g., the cosmetics item studied is used by practically all women, young and old alike).

To summarize, then, each company received a total of four communications, one corresponding to each cell in the matrix shown in Figure 2.

FIGURE 2
DISTRIBUTION OF LETTERS

	+	-
adult	N=18	N=18
child	N=18	N=18

The unit of analysis was company response. As a first step, the data were content analyzed according to Krippendorff (1980) to determine:

- form of corporate communication;
- action(s) taken or promised in the communication;
- nature of enclosure(s).

Of particular interest was the extent to which the corporate communication could be read and understood by its intended recipient (i.e., child or adult). One means of measuring the complexity of written material would be through the use of readability formulas, such as those commonly utilized in the fields of education and journalism. Accordingly, two such techniques--the Flesch Count and the Fog Index--were applied to each primary business response (in most cases, a letter).

The Flesch Count

The best-known formula in the history of readability measurement was developed by Rudolph Flesch. Its popularity can be attributed to both accuracy and ease of application. The Flesch Count measures the difficulty of reading a passage on a scale from 0 (practically unreadable) to 100 (easy for any literate person). It is calculated as follows from writing samples of approximately 100 words:

1. Count all sentences and all words. Divide the total number of words by the total number of sentences. Multiply this average sentence length by 1.015.
2. Count all syllables. Divide the total number of syllables by the total number of words. Multiply this average word length by 100; multiply again by .846.

3. Add numbers 1 and 2. Subtract this sum from 206.835. The result is the reading ease score for the passage (Flesch, 1951).

Regarding validity, the Flesch Count yields scores that correlate .70 with the McCall-Crabbs criterion. The intercoder reliability is in the .90s (Klare, 1963).

The Fog Index

Opposed vehemently to "foggy language," Robert Gunning developed the Fog Index. This formula measures the grade level required for understanding written material. The steps in calculating the Index for passages of 100 words are as follows:

1. Divide the total number of words in the passage by the total number of sentences.
2. Count the number of complex words (those of three or more syllables).
3. Add numbers 1 and 2. Multiply this figure by .4. The result is an approximation of the number of years of schooling necessary for ready comprehension (Gunning, 1968).

As a final step in the data analysis, simple product moment correlations were run across selected variables. Since most were nominal level (such as the various types of company response), these measures were treated as dummy variables (e.g., 0=no letter, 1=letter).

Results

Of the 72 letters mailed to companies, 42 generated a reply, for an overall response rate of 58 percent. There was considerable variation in the rate of response across product categories. Pizza and snack manufacturers were the most likely to reply (with an 83 percent response rate). At the other extreme, clothing firms replied to only 25 percent of consumer communications. Perhaps apparel manufacturers felt that such comments could be handled better at the retail level. Responding to about half of the consumer letters were the remaining three categories: cosmetics (58 percent); cereal (50 percent); and shampoo (50 percent).

Even more variance in response rate was found within product categories. The greatest range occurred among shampoo manufacturers, where the response rate varied from 0 percent for one firm to 75 percent for the other two firms. Among clothing companies, the range in response was 0 percent to 50 percent. Pizza firms were the most consistent responders. All manufacturers in this category replied to at least three of the four letters.

The 42 corporate responses were analyzed to determine the form of communication, type of action promised or taken, and nature of any enclosures. Results of the content analysis are summarized in Table 1. Because companies could reply in more than one way to a consumer letter, the percentages do not add to 100.

Form

The majority of responses (93 percent) were in the form of a "personal" letter. The remaining 7 percent used a pre-printed postcard. While all of the letters included a personal salutation, they were for the most part fairly standardized.

Action

The most frequent type of action, occurring in 86 percent of the cases, was to express appreciation for comments of both praise and complaint. In response to letters of dissatisfaction, companies also were likely to 1) offer possible explanations, and/or 2) defend company policy regarding production and handling of the product.

Occurring less frequently were actions such as forwarding comments to the appropriate party and promising to investigate. Interestingly, very few companies used the letter to offer advice about product use.

TABLE 1

CONTENT ANALYSIS OF CORPORATE RESPONSES TO LETTERS OF SATISFACTION AND DISSATISFACTION

Type of Response	Percentage of Letters Mailed (N=72)	Percentage of Responses (N=42)
<u>Any Reply</u>	58%	100%
<u>Letter</u>	54%	93%
• Comments are appreciated	50%	86%
• Will forward comments to appropriate party	8%	14%
• Defend company policy	14%	24%
• Offer possible explanations	15%	26%
• Offer advice concerning use of product	4%	7%
• Promise to investigate	8%	14%
• Require proof of purchase	4%	7%
• Require return of merchandise	3%	5%
<u>Form Reply Card</u>	4%	7%
<u>Coupon</u>	33%	57%
• For free same product	21%	36%
• For free other product	6%	10%
• For free <u>any</u> company product	1%	2%
• For \$ off product	11%	19%
<u>Free Gift</u>	1%	2%
<u>Reimbursement</u>	3%	5%
<u>Brochure</u>	14%	24%
• Containing information related to product	8%	14%
• Containing suggested alternative or extended uses of product	11%	19%
• Containing general PR about company	4%	7%

Enclosure

The most popular type of enclosure was coupons, included in over 50 percent of the business responses. Consumers were somewhat likely to receive brochures as part of the corporate reply. These could be simple public relation pieces or helpful suggestions for alternative product uses. Reimbursements and free gifts were rarely used, perhaps because of the cost and inconvenience of mailing.

Praise Versus Complaint

There was no significant difference in the rate of response to positive versus negative letters. Twenty-one letters of praise (50 percent) and twenty-one letters of complaint (50 percent) generated a corporate reply. The absence of variation could be due to the fact that each consumer communication included a request for some response. It could also reflect a growing tendency on the part of companies to take seriously all communications--both favorable and unfavorable.

While the rate of reply showed no variation, there were several differences in reply content. Letters responding to consumer dissatisfaction were significantly more likely to include a coupon for replacement of the same product as opposed to some other product ($r=.38, p=.01$). A possible explanation is that manufacturers wanted to restore the consumer's faith in the disfavored product. Letters of complaint were also more likely to result in a free good (coupon, gift, money, brochure) as part of the corporate response than were letters of praise ($r=.35, p=.01$).

Children Versus Adults

Twelve-year-olds were just as likely or unlikely to receive a reply as their older counterparts. Twenty-one letters from children (50 percent) and twenty-one letters

from adults (50 percent) yielded some sort of corporate reply. Again, though, there were differences in the nature of the reply. Companies were more likely to require children to return the merchandise ($r=-.27, p=.05$). They were also more likely to send a free good (coupon, gift, etc.) to adults, but only a letter to children ($r=.25, p=.05$).

Complexity of Corporate Responses

Given the age differential of the consumer sample, the authors felt it important to study the complexity and readability of business responses. One would expect that letters written to 12-year-old children would be much easier to read than those addressed to adults. The two indices used to calculate readability were the Flesch Count and the Fog Index.

Table 2 is a summary of responses received by children and adults along the Flesch scale. As the table indicates, there was virtually no difference in the complexity level of letters sent to adults versus those sent to children. Both groups received responses which fall predominantly in the fairly difficult to difficult range. While this should pose few problems for the adult recipients, it virtually assures that children will not understand much of what is intended to be communicated to them. Apparently, consumer relations personnel do not discriminate between letters originated by children versus adults, even when the distinction is clearly indicated, as it was in this study.

TABLE 2
READING EASE SCORE FOR CORPORATE RESPONSES
TO ADULTS AND CHILDREN USING THE FLESCH FORMULA^a

Responses to Adults	Reading Ease Score	Responses to Children
	100	
	95	Very Easy
	90	
	85	Easy
	80	
	75	Fairly Easy
	70	
	65	Standard
	60	
	55	Fairly Difficult
	50	
	45	
	40	Difficult
	35	
	30	
	25	
	20	
	15	Very Difficult
	10	
	5	
	0	Unreadable

^aEach dot in table corresponds to the Flesch Score for a company response.

TABLE 3

GRADE LEVEL REQUIRED FOR COMPREHENSION OF CORPORATE RESPONSES TO ADULTS AND CHILDREN USING THE FOG INDEX^a

Responses to Adults		Responses to Children	
none	Elementary School Required	none	
6.7		8.0	
7.7		8.0	
8.0		8.4	
8.2	Junior High School Required	9.1	
8.3			
9.0			
9.3			

9.8		9.8	
10.0		10.0	
10.8		10.6	
11.2	High School Required	10.8	
11.7		10.9	
		11.6	
		11.8	

12.8		12.9	
13.7		13.7	
13.7		13.7	
15.3	College Required	13.8	
		14.2	
		14.3	
		14.4	
		15.3	

17.8			
18.2	Graduate School Required		

^aEach entry in table represents the Fog Score for a company response.

Table 3 summarizes the analysis using the Fog Index. Again, corporate communications to adults and children did not vary in the educational level required to understand the content. To put these numbers into perspective, consider that in 1984, the median number of years of schooling for all adults aged 25 and over was 12.6. Only a few of the corporate responses to adults required schooling above this level, the highest being 18.2 years. In fact, most of the responses to adults required far fewer years of education than the average 12.6 years.

Communication to children, however, was not nearly as well-matched. The number of years of schooling completed by 12-year-olds is between 6.0 and 7.0. Not a single response directed to children, however, was written at this level of comprehension. The closest required 8.0 years of formal education. Indeed, a large portion of the communication sent to children would have required anywhere from 12.9 to 15.3 years of schooling for comprehension, the equivalent of college-level education.

Children's Miscomprehension of Corporate Communication

It is intriguing that companies pay so little attention to consumer age in developing an appropriate response to expressions of satisfaction and dissatisfaction. The letters to 12-year-olds often contained elaborate sentence structure that required a college education in order to understand. It is generally acknowledged that one of the most desired outcomes of the process of communication is comprehension. Consumer behavior models consider comprehension to be a prerequisite to attitude formation or change. If the corporate letters are designed to maintain or restore goodwill, then comprehension is a necessary precondition.

To find out just what 12-year-olds were likely to get out of the corporate communications, we conducted a series of in-depth interviews with boys and girls in this age group. Each child was given the appropriate background and was then asked to read one of the corporate letters. After completing this step, the child was given three index cards, each of which contained one sentence from the letter. The child was asked to read each card, then state in his own words what the sentence meant to him. Space limitations prevent a detailed presentation of these findings. However, a few examples of corporate statements and children's miscomprehension are presented on the next page.

"In spite of precautions taken by us and by grocers, at some point a product could be exposed to adverse temperatures and might not maintain its high quality or perform satisfactorily."

- "To keep it at room temperature."

"Comments about our products are very helpful to quality assurance and other appropriate personnel and are carefully monitored."

- "The products were checked so there's not any poison in it."

"We are constantly working to improve existing products and packages while maintaining our high quality standards."

- "They're gonna put new pictures on the packages."

"While we try to create new products which will add convenience and variety to your meals, we also seek to maintain those products which have continued to meet with so much favor and satisfaction over the years."

- "I didn't get it."

"Your comments have been forwarded to our production specialists for their immediate investigation and whatever corrective action is required to prevent a recurrence."

- "What does recurrence mean?"

DISCUSSION

Several limitations of the present study should be noted, each of which offers a suggestion for future research. First, the study was constrained by the use of a small sample. Examining only six product categories and three companies within each resulted in an initial sample of 72. Coupled with the 58 percent response rate, the final sample allowed only a glimpse of corporate response to consumer satisfaction/dissatisfaction. Future research should employ not only a larger number and diversity of product categories, but also a wider range of companies.

A second limitation concerns the use of fictitious letters. The strengths of this methodology include the fact that it enabled measurement of actual company response; the feasibility; and the control over letter content. The major weakness is an ethical one. Hopefully, this problem was minimized through the use of both letters of praise and complaint.

Certainly, other methods could be employed to study corporate response, such as examining company files, role playing, survey research. However, each of these methods poses its own set of limitations. The proprietary nature of complaint data makes it difficult to gain access to company files. Asking executives to role play or complete self-report measures is likely to result in social desirability bias. Clearly, the ideal is to use real consumers with similar concerns about similar products and a similar desire to express those concerns to the company.

These limitations notwithstanding, the present study yielded several interesting findings. One, the overall response rate was lower than that found in previous studies. To our knowledge, only two other published reports measured actual company response to consumer letters. Their respective response rates are given below:

	<u>Praise Letters</u>	<u>Complaint Letters</u>
--	-----------------------	--------------------------

Kendall and Russ (1975)	NA	82%
Pearson (1976)	61%	74%

If only 58 percent of our companies responded, then what happened to the other 42 percent? And why the inconsistency in response patterns both within and between product categories? In some cases, a company responded to all four communications; in other cases, to just one or two; and in still other cases, didn't reply at all. Kendall and Russ reported a similar finding in 1975. Ten years later, it appears that some industry practices still have not stabilized.

Two, companies were just as likely to respond to letters of praise as they were to letters of complaint. This is certainly to their credit, and may be an indication that companies place equal value on both types of consumer feedback.

This apparent lack of discrimination led to the study's most important finding--namely, that companies did not discriminate between letters from children and those from adults. They communicated to 12-year-olds in virtually the same way they communicated to adults. This resulted in letters which used technical wording and complex sentence structure well beyond the comprehension level of the intended recipients. The level of miscomprehension was verified by our in-depth interviews.

Miscomprehension of business communication by children could lead to several undesirable side effects. These include continued dissatisfaction with the product, misuse of the product, and eventual disillusionment with the corporate communication process.

In conclusion, it appears that Blum and his associates (1974) were correct in pointing to the need for proper communication to maintain positive corporate attitudes and assuage negative ones. "Opening more effective channels of communication," they said, "may be a more effective goal than merely reducing complaints."

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THE APPLICATION OF AN EXPECTANCY VALUE OPERATIONALIZATION OF FUNCTION THEORY TO
EXAMINE ATTITUDES OF BOYCOTTERS AND NONBOYCOTTERS OF A CONSUMER PRODUCT

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Abstract

This paper presents the results of a study that uses an expectancy value approach to operationalizing functional theory in order to examine the attitudes of boycotters and nonboycotters of a consumer product. The relationship between three attitude functions and measures of product attitude, purchase intention, and company attitude are examined. The effects of a persuasive message targeted toward one of the functions is also examined. The findings are consistent with predictions based on the functional approach to attitudes and suggest that an expectancy value operationalization of function theory is viable for examining consumer attitudes.

Introduction

The study of attitudes and attitude change has been an important part of consumer research and has played an integral role in marketers' attempts to influence consumer behavior. Marketing's interest in attitudes is logical since an organization's effort is often devoted to the task of creating, reinforcing, or changing attitudes towards its products and services or even the company itself. A number of theoretical approaches have been taken in studying attitudes and attitude change including the structural approach, cognitive consistency theories, social judgment theory, expectancy value approaches, and functional theory. Of interest in this study is the use of functional theory (Katz 1960) as an approach to examining the attitudes of boycotters and nonboycotters of a consumer product, and attempts to change their attitude. Functional theory was felt to be an appropriate approach to the measurement of attitudes in this study since it recognizes the varied motivational patterns underlying attitudes of different individuals. Moreover, Lutz (1981) presented a thorough analysis and reconceptualization of functional theory using an expectancy value framework that included operational specifications. Thus, this study provides insight not only to the value of a functional approach in studying boycotting behavior, but also presents some findings that are relevant to the potential of operationalizing functional theory through an expectancy value measurement framework.

Functional Theory

Functional theory represents a somewhat different approach to the study of attitudes as it is not solely concerned with the individual's information, perceptions, or behavior toward the attitudinal object but rather focuses on the motivational structure or pattern underlying the attitude. Functional theorists (Sarnoff and Katz 1954; Smith et al. 1956; Katz 1960) argue that in order to understand the true meaning and significance of attitudes, and procedures for changing them, one must focus on the functional or motivational base of the attitude. This approach recognizes that different individuals may like or dislike some object with equal intensity, but for different reasons. Thus, any attempt to change an individual's attitude must first consider the function being served and then target that particular motivational base.

While several functional taxonomies have been developed, the most thorough and well-recognized typology is probably that of Katz (1960). Katz suggested four functions that an attitude might serve for an individual including the utilitarian or adjustment, value expressive, knowledge, and ego defensive. A brief description of each function is as follows.

Utilitarian. This function recognizes that people strive to maximize rewards and minimize punishments from their

environment. Positive attitudes are formed toward objects that have been instrumental in achieving desirable goals or avoiding undesirable goals, while negative attitudes are formed toward objects that prevent goal attainment or punish the individual. Utilitarian attitudes are learned through past experience and depend on past reinforcements with the object.

Value Expressive. This function allows individuals to achieve self-expression of their values and the type of person they conceive themselves to be. Value expressive attitudes help the individual to express his/her central values and self-concept. Katz suggests that value expressive attitudes not only give clarity to the self-image, but also help the individual move closer to his/her "ideal" self-image.

Knowledge. This function deals with attitudes that are acquired to help the individual understand and structure his/her environment. Katz argues that people seek some degree of predictability, consistency, and stability in their world to give meaning to what would otherwise be a chaotic universe. The knowledge function provides the individual with a categorization of objects and some indication of what his/her behavior toward an object should be.

Ego Defensive. This function recognizes that some attitudes are formed in order to help the individual protect himself from external threats or internal anxieties or conflicts. The ego defensive function is rooted in psychoanalytic theory and views attitudes as often being subconscious and held to protect the individual's ego.

The functional approach has received recognition from both social psychologists and consumer behavior theorists as a potentially rich approach for understanding the nature of attitudes and the conditions for their change. However, functional theory is widely viewed as having practicality as a general analytical framework and classificatory schema rather than as an operational tool for empirical research due to the lack of specified operational procedures to measure the attitude functions (cf. Kiesler et al. 1969; Day 1973; Eagly and Himmelfarb 1974).

A Reconceptualization of Functional Theory.

The measurement problem associated with functional theory has been addressed by Lutz (1981), who proposed a reconceptualization of the theory using an expectancy value framework. According to Lutz's reconceptualization, the cognitive component of attitude becomes elaborated around the basic needs or values salient to that attitude. Thus, "The index of cognitive structure becomes a measure of the particular attitude function under consideration. The exact nature of the cognitive (E) and affective (V) elements making up the index are viewed as varying with the content of the various functions" (p. 177). According to Lutz, the strength of the relationship between the expectancy value index of a particular function and overall attitude is an indication of the amount to which that function is influencing the attitude.

Lutz suggested that the Fishbein (1963) model represents an appropriate operational specification of the E x V approach to measuring the utilitarian function. This model links well with the utilitarian function since they both focus on the positive and negative aspects of goal-oriented behavior. Using the Fishbein model to measure the utilitarian function is supported by numerous marketing studies that have used the model to measure attitudes of brands through an attributes-based, utilitarian-type model.

Lutz also notes that the value expressive function of attitude relates directly to the conceptual framework of instrumentality theory proposed by Rosenberg (1956). Rosenberg's formulation of attitude, which was heavily influenced by the functional approach, was concerned with the assessment of the extent to which an object facilitates or hinders the attainment of a value goal state. Under Rosenberg's model, the more instrumental an object is for attaining positively valued goals, the more favorable the person's attitude toward the object.

Lutz suggests that the ego defensive and knowledge functions will be less influential in determining consumer attitudes. The ego defensive function generally relates to attitudes regarding the social environment rather than purchasing activity, whereas the knowledge function may serve attitudes toward new products and services but not much else. Thus, in most marketing situations, the utilitarian and value expressive functions should prevail as being the most influential motives for consumer attitudes.

Empirical evidence concerning the viability of operationalizing functional theory is quite limited. Locander and Spivey (1978) conducted the only marketing study to address the problem of measuring the attitude function and to determine if attitudes will vary depending upon the function being served. The results of their study did provide support for functional theory, as they found evidence that the four functions could be measured and showed significant differences when tested against an independent attitude measure. Moreover, they found that a person's attitude varies depending upon the function being served. However, the functional approach to the study of attitudes remains a largely untested theory with its premise rooted more in intuitive thought than in empirical evidence.

Purpose

The purpose of this study is to examine the viability of applying functional theory in the context of an attitude change experiment involving boycotters and nonboycotters of a consumer product. This study addresses several important research issues, including:

1. The viability of using the expectancy value approach suggested by Lutz (1981) to operationalize functional theory and examine the relationship between specific functions and measures of product attitude and purchase intention as well as corporate attitude;
2. To examine difference in the relationship of individual attitude functions to product attitude, company attitude, and purchase intention measures for boycotters and nonboycotters of a consumer product; and
3. To examine the impact of a persuasive message on the relationship of individual attitude functions to measures of attitude and purchase intention for boycotters and nonboycotters.

Overview

The situation used to test the viability of function theory was an attitude change experiment conducted on groups of consumers who were classified as either boycotters or nonboycotters of Coors beer. Two groups were used in the study. The boycott group consisted of members of two Mexican-American student organizations at a West Coast university that had taken positions against Coors. The nonboycott group included students enrolled in undergraduate business courses at the university and who were not involved in any boycott of Coors beer. Both the boycott group and the nonboycott group were further separated at random into either a pretest/post group or a posttest-only group.

Each group was to be told that they were participating in a research project evaluating consumer's attitudes toward different brands of beer. They were also informed that they would be viewing a twenty-minute segment of a tele-

vision program concerning one of the companies whose products they were/ would be evaluating.

The pretest/posttest groups filled out a questionnaire assessing their attitudes toward different brands of beer both before and after their exposure to the attitude change stimulus (the television program), while the posttest-only group received the attitudinal questionnaire only after viewing the television program. The latter groups were asked to respond to a time orientation questionnaire, which was unrelated to the experiment during the time that the pretest group was responding to the attitudinal survey.

After completion of the initial questionnaires the respondents were shown a twenty-minute tape of a segment of the CBS program "Sixty Minutes" that dealt with the Adolph Coors Company's employment of nonunionized labor and the organized boycott of Coors by certain union and Mexican-American groups as a result of the company's policies. The program was generally favorable toward Coors and portrayed the company in a very positive manner.

Immediately after seeing the tape all of the groups were asked to complete a scale giving their evaluation of the program and then filled out the questionnaire assessing their attitudes towards brands of beer either again (pretest/post group) or for the first time (posttest-only group).

Measurement of Functions

Three attitude functions were assessed in this study. These included the utilitarian and value expressive functions, which were specified by Katz (1960), and a company image function, which was conceived specifically for this study. Although a company image type function has not been recognized in any of the work on functional theory, it was felt that in a boycotting situation, consumers' attitudes may serve as an expression of their negative feelings toward a corporation. Moreover, attributes or values relating to the consumer's feelings toward the company itself might not be captured through any other of the functional bases. Also, the "Sixty Minutes" program targeted beliefs related primarily to factors pertaining to the company rather than any product attribute- or value-laden beliefs. Thus, the use of a company image function was felt to be relevant for the purposes of this study.

In order to determine the salient attributes or value relevant to each function, a free response elicitation procedure was used with a separate sample of 55 students. Under this procedure the students were asked to provide a listing of:

- Evaluative criteria or attributes used to select a brand of beer (utilitarian function);
- Values of self-image characteristics that are used in evaluating brands of beer (value expressive function); and
- Attributes or characteristics of beer companies that might be considered in selecting a brand of beer (corporate image function).

The results of the free response elicitation procedure used to identify six salient attributes used in the expectancy value measures for each function are shown in Table 1.

In order to assess the utilitarian and company image functions, Fishbein-type measures were utilized with the expectancy component for each attribute evaluated on a seven-point scale anchored by "very likely" and "very unlikely," while the value component was measured on a seven-point scale anchored by "very good" and "very bad." For the value expressive function, instrumentality was assessed using a seven-point scale anchored by "strongly agree" and "strongly disagree," while the evaluative statements concerning each value were measured on a seven-point scale anchored by "very good" and "very bad."

Table 1
Salient Attributes Elicited
for Each Function

Utilitarian	Value Expressive	Company Image
Taste	Success	Environmentally
Price	Individuality	Conscious
Calories	Masculinity	Reputable
Alcohol Content	Prestige	Nondiscriminating
Natural Ingredients	Adventuresomeness	Well-established
Quality	Outdoor Orientation	Fair to Employers
		Cares about Consumers

Subjects were required to complete the expectancy and value measures used to assess each function for three brands of beer: Coors, Miller Lite, and Budweiser. In the case of the company image function, beliefs were assessed for the companies making the brands: Adolph Coors Company, Miller Brewing Company, and Anheuser Busch.

The final section of the questionnaire measured relevant attitude and purchase information for the three brands. The measures taken here included consumption frequency for each brand, attitudes toward the product, purchase intention, and attitude toward the company making each brand.

Results

The first two objectives of this study are closely related. The viability of using an expectancy value approach to operationalizing functional theory can be tested by examining differences in the relationship of the individual functions to overall measures of attitude and purchase intention for the boycottter and nonboycotter groups. The corporate image function should be particularly salient for the boycotters as this group had taken a strong position against the Adolph Coors Company and its products based upon what they perceived as unfair labor practices and discrimination. Thus, corporate image type attributes would be expected to dominate boycotters' attitudes towards Coors beer and the company rather than utilitarian or value expressive based feeling.

For nonboycotters, the utilitarian function is expected to have the greatest effect in determining this group's overall attitudes toward the Adolph Coors Company and its products. Lutz (1981) has noted that in a consumer behavior domain, attributes used to evaluate products are usually derived from utilitarian motives. Also, to the extent that beer is an image-laden product to college

students, the value expressive function might have some impact on attitudes. Thus, the utilitarian function should be the dominant function influencing the nonboycotters attitudes and purchase intentions and, perhaps to a lesser extent, the value expressive function. However the corporate image function should be less relevant to nonboycotters and thus show a weaker relationship to the dependent measures.

In order to test these expected relationships, multiple regression analyses were performed using the expectancy value measures of the three attitude functions as independent variables and attitude toward the product, purchase intentions, and attitude toward the company as criterion variables. Results of these regression analyses, which were performed separately for the boycottter and nonboycotter groups, are shown in Table 2.¹

It was expected that for the boycotters, the corporate image function should be the most salient and should show a stronger relationship to attitudes than either the utilitarian or value expressive functions. Examination of the regression results in Table 2 for the boycotters shows that the regression coefficients are nonsignificant for the utilitarian and value expressive functions for all three of the criterion measures. However, the coefficients for the corporate image function are significant beyond the .05 level for the attitude towards the product and purchase intention measures and marginally significant ($p < .07$) for the corporate attitude measure. Thus, the regression results for the boycotters are compatible with the predictions made based upon functional theory.

The regression results for the nonboycotting group, which are also shown in Table 2, are also consistent with the

¹The regression analyses for both the boycotters and nonboycotters were performed by combining the two posttest groups. Comparisons of the posttest mean scores of the pretest-posttest group and the posttest-only group on the three dependent measures revealed no significant differences. Comparisons were also made between the two posttest groups for both boycotters and nonboycotters on the individual attributes comprising each function, and only one attribute showed a significant difference. Thus, there is no evidence that the pretest had an effect on the responses of the pretest-posttest group. Given the absence of a testing effect, combination of the two posttest groups within the boycottter and nonboycotter conditions is appropriate.

Table 2
Results for Regression Analyses of Attitude Functions
against Dependent Measures

Function	Attitude toward Product		Purchase Intention		Attitude toward Company	
	B Value	Significance Level	B Value	Significance Level	B Value	Significance Level
Boycotters¹						
Utilitarian	.015	.15	.009	.51	.008	.45
Value expressive	-.008	.46	.008	.56	.008	.42
Corporate image	.025	.01	.024	.04	.016	.07
R ²	.388		.312		.299	
Nonboycotters²						
Utilitarian	.156	.00	.178	.00	.063	.05
Value Expressive	.009	.56	.013	.54	.009	.58
Corporate Image	.015	.42	.011	.63	.040	.03
R ²	.504		.442		.298	

¹N = 30

²N = 30

Table 3

Pretest-Posttest Regression Results for Boycotters and Nonboycotters

Fishbein	Attitude toward Product				Purchase Intention				Attitude toward Company			
	B Value		Significance Level		B Value		Significance Level		B Value		Significance Level	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Boycotters¹												
Utilitarian	.117	.007	.01	.03	.103	.084	.04	.09	.071	.061	.09	.01
Value expressive	-.006	-.007	.79	.64	-.006	-.026	.83	.28	-.002	-.028	.94	.12
Corporate image	.037	-.017	.08	.34	.040	.042	.14	.13	.038	.050	.12	.02
R ²	.633	.568			.412	.504			.410	.652		
Nonboycotters²												
Utilitarian	.134	.207	.01	.01	.106	.219	.14	.01	.045	.141	.28	.02
Value expressive	-.013	-.032	.63	.15	.000	-.003	.99	.91	-.005	.005	.86	.85
Corporate image	.065	.056	.11	.05	.032	.018	.62	.60	.065	.072	.12	.04
R ²	.535	.686			.230	.559			.203	.490		

¹N = 15²N = 15

predictions of functional theory. It was expected that the utilitarian function would be the salient function shaping the attitudes of the nonboycotters. Thus this function should show the strongest relationship to the criterion measures, while the corporate image function was not expected to be as strongly related to the dependent measures. Examination of Table 2 reveals that, for nonboycotters, the regression coefficients for the utilitarian function are not only much greater than those for the other functions, but also are the only functions that are significant for the product attitude and purchase intention measures. However, for the company attitude measure, the regression coefficients are significant for both the utilitarian and corporate image functions.

The regression results for the nonboycotting group do support the predictions made based on functional theory, as the utilitarian function appears to be the major determinant of this group's product attitude and purchase intentions. The fact that the regression coefficient was significant for the corporate image function on the company attitude measure is understandable given the nature of the dependent measure. Attitude toward the company would be expected to be influenced by a measure that assesses perceptions of the firm on various corporate image attributes, as well as feelings toward the product the company makes.

Changes in Functional Relationships

Another objective of this study was to determine whether a persuasive message (the "Sixty Minutes" segment) had an effect on the relationship between the attitude functions and the various criterion measures for the boycotters and nonboycotters. Since this program dealt with issues regarding Coors as a company rather than with the product per se, the corporate image function should be affected the most by the program. Also, since this function was expected to be particularly salient for the boycotters, this group should show the greatest change in the relationship of this function to the criterion measures after exposure to the program.

In order to examine the impact of the "Sixty Minutes" segment on the relationship of the three functions to the dependent measures, separate regressions were performed for the pretest and posttest groups of boycotters and nonboycotters. The results of these regression analyses are shown in Table 3 for the boycotters and the nonboycotters.

Examination of the regression results for the boycotters (Table 3) reveals that the program affected the

relationship of the utilitarian and corporate image functions to the dependent measures. The significance levels of the utilitarian function regression coefficients decreased somewhat from pretest to posttest for the product attitude and purchase intention measures and increased for the company attitude measure. For the corporate image function, the significance level for the regression coefficient on the product attitude measure decreased from pretest to posttest. However, for the company attitude measure, the corporate image function coefficient showed only a slight increase in magnitude but did become statistically significant. The regression coefficients for the value expressive function remained nonsignificant from pretest to posttest.

The regression results for the nonboycotters, which are shown in Table 3, also showed changes from pretest to posttest for the utilitarian functions. The magnitude of the regression coefficients for the utilitarian function showed an increase for all three criterion measures from the pretest to posttest conditions. Moreover, for the purchase intention and corporate attitude measures, the regression coefficients for the utilitarian function were nonsignificant in the pretest condition but became significant when measured after viewing the program.

The nonboycotters also showed a change in the relationship of the corporate attitude function to both the product attitude and company attitude measures after exposure to the program. The regression coefficient for the corporate image function was nonsignificant on both measures in the pretest condition but did become significant in the posttest conditions.

Discussion

The purpose of this study was to examine the feasibility of using an expectancy value operationalization of functional theory, as advocated by Lutz (1981), to examine the attitudes of boycotters and nonboycotters of a consumer product. The results of this study appear to indicate that the expectancy value approach can be a viable way of dealing with the operationalization problem that has limited the application of functional theory to studies of attitudes and attitude change. The relationships found in this study between the individual functions and measures of attitude and purchase intention for the boycotters and nonboycotters tend to be consistent with predictions that can be made based upon functional theory.

It was expected that the corporate image function should show the strongest relationship to the attitude and

intention measures for the boycotters since the dominant underlying motive for their affect would be based upon their feelings towards Coors as a company. However, for the nonboycotters, attitudes and intentions were expected to show the strongest relationship to the utilitarian function as their feelings toward Coors beer would be based upon how they perceived the brand in relation to their consumption goals rather than upon their feelings toward the Adolph Coors Company. It was also expected that the value expressive function might be related to the criterion measures for the nonboycotters, as beer could be an image-laden product for college students that might help them express their self-concept.

The finding that the corporate image function was the only one of the three functions to show a significant relationship to the criterion measures for the boycotters does suggest that their attitudes and intentions are serving a need to express their feelings toward the Coors Company and its product. Along these same lines, the fact that the utilitarian function showed the strongest relationship to product attitudes and purchase intentions for the nonboycotters suggests that this function is the one being served by the feelings of this group.

It should be noted that the regression results reported in Table 2 were based on the posttest measure, taken for both the boycotters and the nonboycotters. This means that both groups viewed the "Sixty Minutes" program that focused solely on corporate image issues rather than anything about the actual product. The fact that the utilitarian function showed the strongest relationship to attitudes and intentions for the nonboycotters, even after exposure to the program, might be taken as further evidence of the argument that this group's feeling toward Coors is utilitarian-based.

Another factor that should be noted is the results found when comparing the relationship of the functions to the criterion measures for the pretest and posttest nonboycotter group. Exposure to the program resulted in not only an increase in the relationship of the corporate image function to both product and company attitude, but also strengthened the relationship of the utilitarian function to all three dependent measures. These findings suggest that the "Sixty Minutes" program may have not only affected the corporate image function but also helped to reinforce the utilitarian-based feelings of the nonboycotters towards Coors.

Another interesting finding of this study was the absence of a significant relationship between the value expressive function and the various criterion measures. As noted earlier, beer would seem to be a value or image-laden product for college students. However, the results of this study suggest that, at least for these students, that is not the case, as the value expressive function showed no relationship to attitudes or intentions for either group.

Limitations

There are of course several limitations to this study. A major limitation that must be dealt with in future research is the problem of multicollinearity among the expectancy value measures representing the independent variables. Examination of the regression results found in this study show that the amount of explained variance (R^2) is generally quite high, while the values of the individual regression coefficients are often low or nonsignificant. This is an indication of a multicollinearity problem that would affect the relationship of the regression coefficients for each function to the dependent measures. This problem should be recognized in future studies as the expectancy value measures used to operationalize the functional indices may often tend to be highly correlated with one another and techniques such as factor analysis may need to be used to help separate out the various functions. Another problem of this study was the rather small sample sizes that were used in the pretest and posttest conditions. Only fifteen subjects were assigned to each

condition and thus the regression results for the pretest-posttest comparisons could be somewhat unstable.

It should also be noted that the corporate function that was developed for this study is not really a function that is recognized by any of the functional theorists. This function was used on the assumption that boycotters will base their attitudes and intentions on the feelings they have toward the company itself. This motive base is not specifically recognized in any of the functions specified by the functional theorists. More work might be needed to determine whether the corporate image function is a valid construct and whether the measures used here are capable of measuring this function.

These problems withstanding, this paper does provide some interesting findings regarding the possibility of using expectancy value measures, which are very popular in consumer behavior research, to operationalize functional theory and utilize this approach to studying consumer attitudes.

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THE DRAMATIC SIDE OF CONSUMER RESEARCH:
THE SEMIOLOGY OF CONSUMPTION SYMBOLISM IN THE ARTS

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The essential function of consumption is its capacity to make sense.... Forget that commodities are good for eating, clothing, and shelter; forget their usefulness and try instead the idea that commodities are good for thinking; treat them as a nonverbal medium for the human creative faculty.

--Mary Douglas (1979),
The World of Goods, p. 62

Abstract

This paper comments on the problems facing work in consumer research that draws on the humanities. It argues the case for such humanistic research and, as one illustration, proposes the thesis that consumption symbolism in a movie, play, or other dramatic text may do much to convey that artwork's meaning. It supports this interpretive claim with three examples from Out of Africa, Painting Churches, and Gremlins. It justifies these interpretations as a type of abductive inference and concludes that such semiological analysis of the dramatic arts plays a potentially valuable role in consumer research.

Introduction

The field of consumer research has long claimed to be an interdisciplinary area of inquiry. Implicitly, however, we have defined "interdisciplinary" as if it meant borrowing from the social sciences without regard for the potential contributions of other knowledge sources. Thus, we have welcomed inputs from psychology, sociology, anthropology, economics, and even biology. Yet, we have drawn relatively little on philosophy, history, literature, linguistics, the arts, and other fields generally associated with humanistic studies. In short, in an attempt to be scientific, we have overspecialized on a narrow range of knowledge. We have ignored most of the liberal arts in general and the humanities in particular.

Recently, several consumer researchers who are by now winning a reputation for being "weird" have begun to call with increasing insistence for a greater receptivity in our field to contributions from the humanities or from other spheres of humanistic thinking. I refer especially to the writings of Beth Hirschman and Russ Belk, as well as to some of my own efforts, though additional contributions in this direction have come from many other sources too numerous to mention in full (e.g., Durgee, Faber, Fennell, Hudson, Kassarjian, Levy, McCracken, O'Guinn, Ozanne, Pollay, Semenik). This burgeoning of interest in humanistic studies gives me some hope that the humanities may one day take their place as part of a truly interdisciplinary field of consumer research. The present paper is dedicated to advancing that cause.

Preliminary Definitions

Before going much farther, I should probably clarify what I mean by "humanism" and "the humanities." My copy of Webster's defines humanism as "devotion to the humanities" and then defines the humanities as "the branches of learning (as philosophy, languages) that investigate human constructs and concerns as opposed to natural processes (as physics or chemistry)." Such meanings of humanism as "humanitarianism" (concern for human welfare) and "a doctrine, attitude, or way of life centered on human interests" (various philosophies that stress humane values and individual dignity) are regarded as secondary. Beth

Hirschman has recently added what we might view as a tertiary meaning. In her excellent article on "Humanistic Inquiry in Marketing Research," she offers no real definition of "humanism," but rather delineates "humanistic inquiry" by comparing it with what it is not -- namely, positivistic. In this sense, her treatment of humanism corresponds fairly closely to what Lincoln and Guba call "postpositivism." It emphasizes knowledge gained from the researcher's "direct personal experience," thereby opening the door to introspective, subjective, and phenomenological perspectives.

In this paper, I shall stress the first dictionary definition of "humanism" as "devotion to the humanities," while still recognizing the importance of such related concepts as "humanitarianism," "humane values," "human dignity," and "humanistic inquiry." I believe that consumer research has much to gain from incorporating humanism thus defined and, indeed, that such a broadening of our field is a necessary precondition to the evolution of a truly interdisciplinary study of consumption phenomena. In my view, we can only benefit from embracing all forms of knowledge. Many consumer researchers already recognize this near-truism. Yet some place barriers in the way of progress toward a real interdisciplinary perspective. These barriers frighten me. They threaten the whole enterprise. For this reason, they constitute a major theme of this paper.

Beginnings

As my friend Beth Hirschman has commented, it was relatively easy a few years ago to write and to publish grand, iconoclastic position papers calling for new kinds of consumer research on such topics as hedonic consumption, consuming experiences, esthetic appreciation, emotional responses, right-brained thinking, and other "weird" topics. Almost everybody recognized that such issues had been neglected in our field. Many acknowledged the need for research that would move in these directions. Hence, journals willingly published overviews and review articles that put the required research into perspective, that tied what needed doing to what had already been done, and that emphasized the continuity of the new with the old.

Bigger problems have awaited those who have actually tried to do what we might, for convenience, call the new-wave research. Naturally, such studies deviate from the pre-established canons that have guided our field through its first 25 years of development. Yet, too often, the new-wave efforts have been judged by those very old-wave criteria from which they attempt to depart. The all too predictable result has been disappointment, criticism, and (worst of all) rejection from publication.

I know of several masterful papers by friends and colleagues that have suffered from this kind of discrimination. Not surprisingly, I have gotten myself involved in such situations and can therefore speak from personal experience about some of the threats and obstacles that confront anyone who takes my advice and tries to bring the humanities into the study of consumer research. I shall address these barriers briefly before moving on to my main thesis.

Barriers

The Shibboleth of Managerial Relevance

For whatever coincidental set of reasons, the sorts of people who try to incorporate humanistic elements in their work seem to be exactly the same folks who believe that managerial relevance is at best irrelevant and at worst

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inimical to the advancement of consumer research. For what it's worth, my own position is that, whereas marketing research ought properly to strive for practical applicability, the issue of managerial relevance should be regarded as irrelevant to consumer research so that attempts to apply the standard of usefulness so dear to marketing practitioners can only cause damage by distorting the focus of the research and deflecting it from its proper central concern with the consumer. (Here, I use "proper" in its proper sense.)

Of course, I recognize that this point merits debate and have had fun discussing it publicly with some who vehemently disagree with me. My point here, however, is that those who do agree with me have tended to find themselves in the camp of the humanists and have therefore tended to court the rejection of humanism by those who subscribe to the managerial shibboleth.

A logical connection between humanism and independence from managerial concerns does seem to exist. Someone who feels that a study of consumer behavior matters because of the light it sheds on the nature of the human condition appears unlikely to care very much about whether it will also contribute directly to the incomes of the capitalists who hold shares of stock in business corporations. An apparent difference in temperaments characterizes the two points of view. By this, I do not mean to imply that it is impossible to imagine practical-minded humanists. Writing a poem to earn money for a children's hospital provides an obvious counterexample. All we need is one such counterexample to show forever that humanism and managerial relevance are not conceptually distinct. However, I do suggest that, empirically, the drift toward humanism and the thrust toward managerial relevance just happen to occur in roughly inverse proportions among the people I know who have chosen consumer research as their main line of work. When fate decrees that my managerially inclined friends pass judgment on my more humanistic buddies, their critical evaluations are predictably negative. The heroes of humanism tend to create work that gets rejected by the minions of management.

The Positivistic Backlash

It also happens that the established order, the old-wave in consumer research, has clung very tightly to the positivistic tenets of logical empiricism. Among the most cherished of these tenets are the beliefs in the objectivity of the research process, the detachment of the observer, and the value-free nature of the observations. The humanist, of course, cheerfully throws all this out the window. The humanist subscribes to the postpositivistic acceptance of subjectivity, involvement, and value-laden interaction with one's data. This acceptance is "cheerful" because the humanist realizes that all perception involves a subjective component, that observers always affect what they observe, and that no inquiry can be value-free so that to pretend otherwise is simply a scam.

No humanist that I know about wants to throw away data or eliminate empiricism. Again, for what it's worth, I deeply value the testing of theory by means of empirical data (in the context of justification). Even more, however, I value the use of subjective, impressionistic, and introspective sources toward the development of theory (in the context of discovery). The role of humanism in consumer research has seldom moved past the creation of concepts. It is simply too early to apply the usual standards of empirical validation to contributions that remain embryonic or are, at most, still in their infancy.

Nevertheless, many of our reviewers viciously chop down studies that attempt to draw on the humanities because they do not satisfy the canons of positivism. Here, they raise method above aims and concepts. They rule out studies whose measures and tests have not yet caught up with their reach and scope. They thereby constrict and cheapen our field even while they guard its roots and protect its vested interests.

Fear of the Unknown

The protection of vested interests translates into a political problem familiar to all concerned with the sociology of science. Those in power want to stay there and, I believe, react with some fear to the possibility that things might change. When you are already at the top, any change is likely to be for the worse.

Thus, I have actually seen reviewers argue for the rejection of a manuscript that drew on the humanities on the grounds that, if we publish this sort of thing, then everyone might start doing it. Imagine the same logic applied to Einstein: If we encourage Albert, then everybody might start thinking that $E = MC^2$. Of course, in the case of humanism, the truth is that everyone would not suddenly turn to applications of the humanities in consumer research. Most lack the necessary background, sensibilities, and interests.

Yet suppose that the publication of a few humanistic pieces did encourage many researchers to incorporate the humanities in their work. Would this be so bad? I would argue no, for at least three reasons. First, such consensual validation would suggest that some kind of truth lurks within this new-wave approach. Second, a sudden infusion of humanism into our field would make most of the papers that we have to wade through a lot more interesting. Third, a greater reference to the humanities would move our field closer to its claim for a truly interdisciplinary status.

With such persuasive reasons for an increase in the role of humanism in consumer research, its opponents must resort to some pretty tricky tactics to keep it out. These range from the ridiculous to the sublime. At the former extreme, we find the gesture of one editor who told me that to quote some lines from a poet who has been dead for 300 years, I would need the permission of the author and publisher. At the latter extreme, we find the ploy of simply defining the problem out of existence.

The Definitional Ploy

This most insidious tactic threatens us most dangerously because it forms such a basic premise that it may easily be overlooked and thereby remain unexamined amidst all the confusion over the possible contribution of humanism. I refer to our definition of what constitutes consumer research in the first place. This lies at the heart of what I want to challenge.

Many leaders in our field and most of the scholars who review journal submissions implicitly define consumer research as including only that which already gets published -- namely, studies of buyer behavior. From this point of view, it may well be true that the humanities have little to contribute to consumer research. However, I believe that the definition itself is wrong. Carefully scrutinized, it falls. And, with it, falls everything for which it stands.

In my view, consumer research studies all forms and all aspects of consumption, which includes anything having to do with the acquisition, usage, and disposition of goods, services, and ideas. Hence, consumer research embraces the study of any phenomenon related to consumption. True, such phenomena could relate to people's buying decisions, but they could just as easily relate to their appreciative responses in using a product or to the meaning that their consumption activities have for others.

The theme of this special topic session helps me provide a concrete example of what I mean. This example is fairly extreme because it departs widely from our conventional view of consumer research. I suggest that it indicates the range of exploration opened to a broader definition of our field of inquiry. As one illustration of what this broadened conceptualization implies, it develops a central thesis to which I now turn.

The Thesis

Briefly stated, drawing on the viewpoints heretofore expressed, I propose that we may regard consumption phenomena found in a work of art as one viable avenue for exploring the meaning of that artwork. In other words, an analysis of consumption symbolism in a film, a play, a novel, or some other dramatic or narrative form may help us interpret the significance of such artistic expressions. It follows that our understanding of symbolic consumer behavior as found in works of art may reveal much to us about the meanings contained therein.

To me, this point seems blindingly obvious once it has been stated in such bald terms. Yet, experience has taught me that it tends to meet with critical resistance. I shall therefore bolster it by means of three clarifying examples.

Three Examples

Out of Africa

In a recent paper with Mark Grayson, we emphasize the role of minor uses of consumption imagery to develop plot and character in the film Out of Africa. One case in point concerns this movie's use of consumer products to convey its sustained treatment of the clash between the European and African cultures that surround Karen Blixen's household. Karen, as played by Meryl Streep, struggles to retain her Western identity even as she sinks her roots further and further into the African soil. Her own conflict is mirrored by the effect that her incongruous possessions have on those around her.

This use of consumption imagery appears in the response of utter amazement with which Karen's otherwise unflappable manservant Farah greets her cuckoo clock. Later, the Kikuyu children watch the clock intently until the little bird pops out and they run out of the house giggling with surprise and delight.

A similar clash of cultures appears in Karen's attempts to get her houseboy Juma to wear white gloves while on duty. At first, he dangles his hands in the air in a gesture of mock helplessness. Later, when he tries to pour the wine, the bottle slips through his fingers and crashes onto the table. Ultimately, Karen removes the gloves and admits that "this wasn't a very good idea."

Karen's chef Kamante has similar difficulty adapting to her Western ways. In one scene, she visits the kitchen and tries to show him how to use a rotary eggbeater. But, the moment she leaves, he abandons her notion of efficiency and reverts to using the spoon with which he is more comfortable.

A comic parallel to this treatment of cultural conflict substitutes animals for people. When Karen and her lover Denys (Robert Redford) take their gramophone into the jungle, a group of curious monkeys clusters around it with great interest. Ultimately, the monkeys jar the tone arm and have to be chased away. Thus, the Westerners bring Mozart into the African wilderness with mixed success. How fortunate, the film buff might note, that they did not try their luck with Salieri.

Painting Churches

Tina Howe's play entitled Painting Churches recently appeared in a filmed version on public television. Again, this play uses symbolic consumer behavior to advance many aspects of its character development. Particularly effective, in my view, is the manner in which consumption imagery conveys the tendency of the play's three central characters to talk past one another. For example, in one striking scene, Mags tries to tell her parents (Gardner and Fanny) about some wonderful news concerning her forthcoming one-woman show at a New York gallery. Her excitement is completely undercut by the counterdialogue between her mother and father as they enthusiastically consume a

box of saltines (emblem of WASP blandness) while scarcely paying any attention to what their daughter is saying (which turns out to be the story of her life).

MAGS. I'm starving. I've got to get something to eat before I collapse! (She exits towards the kitchen.)... (returns, eating saltines out of the box)...

GARDNER. (reaching for the saltines) Hey, Mags, could I have a couple of those?

MAGS. (tosses him the box) Sure!...

GARDNER. Thanks. (He starts munching on a handful.)... (mouth full) Mmmm, I'd forgotten just how delicious saltines are!... (offering the box of saltines to FANNY) You really ought to try some of these, Fan, they're absolutely delicious!

FANNY. (taking a few) Why, thank you... These are good!

GARDNER. Here, dig in... Take some more.

MAGS. I have some wonderful news... amazing news! I wanted to wait til I got here to tell you. (They eat their saltines, passing the box back and forth as MAGS speaks.)...

FANNY. (reaching for the box of saltines) More, more....

GARDNER. (swallowing his own mouthful) I told you they were good.

Gremlins

Consumption symbolism assumes even more sinister proportions in the sustained thematic treatment of antimaterialism that appears in the movie Gremlins. One example occurs in the film's use of household appliances to convey its antimaterialistic message.

At first, kitchen appliances merely cause minor inconvenience and waste. An egg cracker makes a mess and puts the eggs everywhere but in the mixing bowl. An automatic juicer throws gook all over the place. A coffee machine produces undrinkable black goo. A "bathroom buddy" squirts toothpaste on its inventor's shirt.

But soon, the appliances are explicitly associated, by contiguity, with the evil little monsters that threaten to take over the town. During one dramatic encounter in the kitchen, the appliances are used to destroy two of the gremlins. One is ground up in a mixing machine (which, predictably, sprays him around the room). Another is cooked in the microwave (where, equally predictably, he explodes in a disgusting mess just before the timing bell sounds and the door swings open to indicate, I suppose, that he's ready for consumption).

From here, it is only a short step to the stage at which the gremlins, as symbols of consumption gone awry, turn the household appliances back on their creators. In the ultimate chase scene through a department store, all decorated for the Christmas Season, the most evil gremlin pursues Billy with everything from saw blades to a baseball-pitching machine to a dart gun to a chain saw to a real pistol. Here, consumer goods serve as weapons against the society that has created them. In this perverse consumption imagery, the movie's central message emerges for all to see. It says, rather directly, that if we are not careful, our materialism will destroy us.

Justification

This approach to interpreting artworks through a consideration of their consumption symbolism shares much with the tradition of semiology that stemmed from the work of the Swiss linguist Ferdinand de Saussure and developed in

the studies of such latter-day exponents as Roland Barthes. Since I have argued this point in my recent paper for the Conference on Semiotics and Marketing at Northwestern, I shall treat it only briefly here, simply pausing long enough to remark that the semiological tradition lends some legitimacy to the analysis of symbolic consumer behavior in interpreting works of art (high culture) and entertainment (popular culture).

The type of reasoning employed in such interpretations was referred to by Charles Peirce as "abduction" and considered by him as a valid form of inference. In this view, deduction reasons from a rule and a case to a result; induction reasons from a case and a result to a rule; abduction reasons from a rule and result to a case. For example, suppose we know the general rule that people high in social status drive expensive cars. Suppose also that, in a particular work of art, we learn the result that Mary drives a Cadillac. We may then infer abductively the case that Mary is high in social status. This inference remains only an hypothesis until supported by further evidence.

An engaging book called The Sign of Three, edited by Umberto Eco and Thomas Sebeok, has established abduction as the type of inference employed by great detectives in solving crimes or by brilliant doctors in diagnosing illnesses. When we interpret a text by means of analyzing its consumption symbolism, in effect, we play Sherlock Holmes and ask what these clues tell us about the meaning of the artwork. Clearly, this should not be regarded as idle speculation. The validity of our interpretation rests on evidence. This evidence appears in the work of art itself. Our inferences depend on a close reading of the text. In essence, this is an empirical enterprise.

It follows that any interpretation which proceeds in the manner I have suggested will seek its justification in the body of the text at hand. As evidence for the validity of its claims, it will tend to offer quotes or excerpts or paraphrases. Readers should repress their temptation toward impatience with such detailed documentation. In this context, the use of quotations is not superfluous or unnecessarily pedantic, any more than are the use of F-statistics in analyzing the results of an experimental design or LISREL coefficients in testing a structural model. Those who attempt to deal with materials drawn from the humanities need their close readings of the text because that is the type of empirical evidence that they bring to bear.

Conclusion

If this paper has convinced even one consumer researcher that the humanities have a useful role to play in our field as illustrated by the semiological interpretation of consumption symbolism in the arts, it will have served its purpose. When we look around us, we see a shining array of films, plays, television productions, novels, and other dramatic or narrative art forms, all of which draw upon consumption imagery to develop the meanings that their creators wish to convey. These sources are far too rich for us to ignore without doing ourselves a grave injustice. More than that, we may hope to use our knowledge of consumer behavior to shed some light on the meanings of artworks. To a humanist, that goal seems eminently worth pursuing for its own sake.

GROCERY SHOPPING LISTS: WHAT DO CONSUMERS WRITE?

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ABSTRACT

This paper presents an analysis of 129 grocery lists containing a total of 2854 items. Approximately 25% of all items were brands, most were products, few items were product classes, and one was a need. The percent of brands on lists varied across consumers. Ethnicity was the only consumer characteristic related to percent of brands. The store at which lists were collected was related to percent of brands independently of ethnicity of its customers. Inquiry into the construction of shopping lists is suggested as a potentially fruitful research area.

The shopping list of a young, single male with an annual household income between \$10,000 and \$19,999, employed in a service occupation, shopping regularly two to three times a week contains the following items.

diet Pepsi-2 six packs	toothpaste
Milk	bandaids
bread	shoe strings
deodorant	T.V. dinners
cigarettes	Spam
T.V. Guide	mac & cheese
beans	Old Spice
Ragu	Zest
spagetti	lunchmeat
pretzels	

This list represents a typical combination of products and brand names and provides us with some insight into the consumption patterns of its author.

Consumer researchers have ignored the content of shopping lists as an area of inquiry, even though they have considered use of lists as an indicator of preshopping planning. Shopping lists represent the codified purchase intentions of consumers. Their content can suggest the extent to which consumers concretize their purchase intentions as they construct their lists, or articulate needs, the fulfillment of which remains open to choice.

The research reported here presents an analysis of the content of the lists of 129 grocery shoppers. The investigation is exploratory and reports results from a preliminary stage of an investigation of shopping styles and planning. It is directed primarily at the content of shopping lists and whether variations in content are evident and, if so, can they be explained by consumer characteristics or marketing strategies of stores.

BACKGROUND

Consumers commonly shop for groceries with lists of items for purchase. The use of a list represents some degree of preshopping planning along with reading grocery advertisements and reduces impulse purchasing for purchase transactions exceeding fifteen items (Kollat and Willett 1967, Miller and Zikmund 1975). As Kollat and Willett (1967) note the extent of preplanning may be enumerated into five types of purchase decision making--(1) both product and brand decision made prior to store visit; (2) product decision made prior to visit, but not the brand; (3) product class decision

made prior to visit, not product or brand, (4) consumer need recognized, but not product class, prior to visit; and (5) need not recognized prior to store visit.

These five types represent different degrees of susceptibility to in-store stimuli. However, they are not necessarily activated in a hierarchical manner. Spotting a display of cookies might trigger need arousal for dessert, but once that need were aroused, the consumer might automatically purchase Pepperidge Farm cookies. On the other hand, the same customer might spend several minutes deciding on which type and brand of convenience entree to purchase, having arrived at the store to purchase something quick for dinner. The items on shopping list indicate the degree of preshopping planning and may be consumer needs, broad product classes, product categories, brand names, or some other categories.

The existence of a brand name on a shopping list can represent one of several circumstances. Many shoppers list brands when they have coupons for the brand, or the store is running an advertised special. In both cases the consumer is responding to the short term promotional efforts of a firm or retailer and choice is an outcome of recent information search and brand evaluation.

Other items are indicated by brand name because consumers find it easier, more convenient, or more natural to write the brand--Mop and Glow instead of floor cleaner with wax. Some brand names represent strong brand preferences where the item is written by the shopper or someone other than the shopper. Brands listed for these reasons represent the consumer's response to the long term promotional efforts of the firm and indicate a truncation of the consumer deliberation process--the elimination of the information search and brand evaluation stages.

In some cases brands may represent the product category as may be the case with 'bandaids' on the list reproduced. The consumer may not intend to purchase that brand, but uses it as a surrogate for the product category. Such use indicates a response to the long term marketing efforts of a firm, but not in a way that marketers desire.

When product categories are written on lists they may reflect a delay in the brand decision. Examples are where the consumer lists a product, but plans to search for information on alternatives in the store, or locate a sale or coupon item, or just a different brand for the sake of variety. Consumers may list products when they have actually made a brand decision. A product may be listed, but it stands for a brand to which the consumer is loyal, as when ketchup on the list means Heinz, or a brand which the consumer passively repurchases without a commitment to it. In both cases, the product name is used, but the brand decision has been made.

Finally consumers may list broad product classes--vegetables, dessert--or consumption needs--dinner stuff. While it is possible that a consumer who writes such items may have a product and/or brand in mind, it does not seem likely. It suggests that decision making

has been deferred to allow mood and in-store stimuli to play a role in choice.

While analysis of the mere content of a grocery list, cannot demonstrate the degree of response to the long and short term marketing efforts of firms and grocery retailers, nor the degree of consumer preshopping planning, it does provide some evidence of the labels which consumers attach to their purchase intentions. A review of articles over the past twenty years in Journal of Marketing, Journal of Marketing Research, Journal of Consumer Research, and Advances in Consumer Research revealed no articles investigating the content of consumers' shopping lists, or suggesting the content of lists as a source of data for studying consumer behavior. Two articles describing techniques for studying in-store customer behavior in retail settings failed to mention the existence of shopping lists, much less their content (Applebaum 1951; Granbois 1968).

Three studies using shopping lists in the research design were located. Kollat and Willett (1967) used shopping lists in their study of grocery impulse purchases. The content of shopping lists was used to assess purchase intentions as part of the measurement of impulse purchases. They used the presence or absence of a shopping list as an independent variable accounting for extent of impulse purchasing. The other two studies used the content of shopping lists as part of a research design to demonstrate the efficacy of projective techniques and to assess social definitions of products. Haire's (1950) study and its replication (Webster and Von Pechmann 1970) used two shopping lists constructed by the researchers as experimental stimulus variables. These 'shopping list' studies provided no information about the content of actual consumers' shopping lists.

The purpose of the present analysis is to provide preliminary data about the content of grocery shopping lists as a first stage in researching the dynamics of their construction. The basic research questions in this study are: (1) What are the relative frequencies of brand names, products, product classes, consumer needs, or undecipherable and miscellaneous other symbols contained on shopping lists? and (2) Are there variations across consumers in these relative frequencies and, if so, can they be explained by consumer characteristics or marketing strategies of stores?

RESEARCH DESIGN

Sample and Data Collection

No attempt was made to gather a systematic sample of a particular population since this research is exploratory. Rather, four grocery stores were picked in different locations as sites to intercept shoppers. On seven occasions at different times and on different days of the week grocery shoppers waiting in check out lines were asked if they had used a list in their shopping. If they replied yes, they were asked if they would fill out a brief questionnaire and give up their list in the interest of research about what consumers write on grocery lists. Less than five percent of those approached who indicated they had used a list refused to participate. Shoppers with less than seven items and those obviously engaged in reading, conversations, or otherwise were not approached. A total of 129 usable lists and questionnaires were collected over a three week period, 51 from stores in three different chains and 78 from a single Super Stop and Shop, a recently opened, one-stop shopping, grocery, drug, and general merchandise store which is part of a strong regional chain.

Each item on the shopping lists was coded by product category and whether it was a brand name, product name, product class, private label, need, or other. Extraneous items such as "Pick up Bobby at Boy Scouts

at 4:00" were ignored. Questionnaire data included basic demographic and socioeconomic data and number of shopping trips per week normally made. It also included a Likert scaled question on self perception of extent of brand loyalty for ten grocery product categories and in general.

Analysis

Items from the shopping lists were aggregated by store from which they were collected. The percentage of brands, products, product classes, private labels, and needs were computed for the lists as a whole and brands by product category. A Fisher's Exact test was used to test statistical significance of differences in the percentage of brand names by product category between lists gathered from Stop and Shop and those from the other stores.

The percentage of total items which were brand names was calculated for each respondent. Means for percentage of brand names on lists and for brand loyalty self perception were calculated separately for categories of sex, marital status, ethnicity, age, household income, number of income earners, occupation, household size, number of shopping trips per week, and store where data was collected. An ANOVA procedure was used to calculate statistical significance for difference in the means. Differences in consumer characteristics between stores were tested by Chi-square.

RESULTS

Shopping List Content

The 129 lists yielded a total of 2854 shopping items for an average of 22 items per list. The shortest list contained five items, while the longest contained 112. The modal number of items was 17.5. Of the total shopping items 25.7% were brand names. Only nine items were private labels, and 49 were product classes. One need was listed--"baby needs". Eight of the items were not decipherable.

The percentage of brand names varies by product category as one would expect. Product categories with few brand alternatives such as meat and fish and produce have very small percentages of brands. Within product categories where a number of brand alternatives exist, the percentages are much higher, and they vary considerably. Table 1 presents the percentage of brands by product category for all shopping items and for those on lists collected at Super Stop and Shop and the other stores.

The differences in percentage of the brand names between lists obtained at Stop and Shop and those from other stores suggests different potential explanations. One is that the store's marketing strategy--its product assortment, its quality levels in different product lines, its carrying a private label, or its sales promotional strategy induces consumers to list fewer or more brands. Another potential explanation is that consumer characteristics, socio-demographic or shopping orientations, account for these differences. To assess the efficacy of these competing explanations the characteristics of consumers shopping at Stop and Shop versus those at other stores were compared.

Results of Consumer Characteristics

A comparison of the socio-demographic characteristics of Stop and Shop respondents versus those from the other stores revealed no differences in age, household income, number of wage earners, size of household, or occupation. However, the ethnic composition of respondents from the two samples was significantly different. The Stop and Shop respondents were 98.7% (77) White and 1.3% (1) Black with no Hispanics. The respondents from other stores were 76.5% (39) White,

19.7% (11) Black, and 3.9% (2) Hispanic ($\chi^2 = 16.9$, $P < .01$). Differences in the percentage of brand names on lists from stores may then be a function of the subcultural affiliations of their customers.

TABLE 1
PERCENTAGE OF BRANDS BY PRODUCT CATEGORY FOR ALL ITEMS AND BY STORE

PRODUCT CATEGORY	ALL ITEMS		STOP AND SHOP		OTHER STORES	
	%	N	%	N	%	N
Beer	83.3	6	-	0	83.3	6
Cereals	59.4	64	56.4	46	66.7	110 ¹
Household Cleaners	64.5	186	48.2	108	87.2	78 ¹
Personal Care	53.1	196	55.7	88	50.9	108 ²
Snack Foods	41.7	144	35.9	92	51.9	52 ²
Beverages & Soda	40.0	196	36.3	114	59.3	81 ¹
Frozen Foods	35.7	16	29.5	61	47.8	236 ¹
Pet Products	33.3	57	36.8	19	31.6	38 ¹
Packaged & Prepared	28.7	272	21.6	162	39.1	110 ¹
Other	26.3	95	25.5	47	27.1	48
Paper Products	25.7	136	25.0	76	26.7	60
Canned Goods	24.1	133	22.2	81	26.9	52 ¹
Condiments & Spices	21.4	159	12.7	94	33.9	65 ¹
Dairy	14.6	309	14.5	166	14.7	143 ¹
Bakery Goods	9.0	122	1.5	67	18.2	55 ¹
Can't tell	8.7	69	9.4	32	8.1	37
Meats & Fish	3.8	261	3.0	133	4.7	128
Produce	0.6	366	0.0	238	1.6	128
ALL ITEMS	25.7	2854	21.1	1624	31.6	1230 ¹

¹ $P < .001$
² $P < .05$

The mean percentage of brands on the lists of the three subcultural groups varied considerably with Whites at 21.5%, Blacks at 35.9% and Hispanics at 57.0% ($F = 8.6$, $P < .001$). The respondent numbers were very limited for Blacks and Hispanics with 11 and 2 respectively. Thus, their small sampling argues for caution in interpreting these figures as estimates of the mean number of brands per list for these two subcultural groups. The magnitude of the differences does suggest that there may likely be subcultural differences in relative incidence of brand names on shopping lists.

Since the use of brand names results from different shopping strategies and sensitivities to long versus short term promotional efforts, the differences found across the subcultural groups may be explained by these consumer behaviors. While the present study lacks data on subcultural variations across all of the potentially relevant consumer behaviors, such as deal proneness and coupon usage, data was collected on self perception of brand loyalty across product categories. There were no significant differences in brand loyalty self perception between ethnic groups for bakery products, canned goods, beer, household cleaning products, pet products, or in general. Table 2, however, reports differences in self perception of brand loyalty measured on a five point Likert scale anchored by 1 as very and 5 as not at all for five product categories.

TABLE 2
BRAND LOYALTY SELF PERCEPTION BY SUBCULTURE

Product Category	Whites	Blacks	Hispanics	F value	P
	\bar{x}	\bar{x}	\bar{x}		
Personal Care	2.8	2.2	4.0	8.6	<.001
Frozen Foods	3.6	2.9	3.0	3.0	<.05
Dairy	3.6	2.6	4.5	1.5	<.05
Beverages & Soda	3.3	1.3	2.3	2.5	<.01
Snack Foods	3.4	2.1	2.9	1.5	<.05
N	116	11	2		

Blacks consistently considered themselves to be more brand loyal than Whites across these five product categories. The greater incidence of brand names on Blacks' shopping lists could be a function of their stronger brand loyalties, consistent with previous findings (Wellington 1981).

Results of Store Differences

In order to remove the effects of the differential ethnic composition of the stores as a source of variation in the shopping list content and brand loyalty self perception, these two variables were compared for respondents from Stop and Shop versus other stores for Whites only. Table 3 demonstrates that differences exist in brand loyalty for three product categories and for percentage of brands on shopping lists between Stop and Shop, Beits (a local chain), and two other stores.

Table 3 indicates that the brand loyal self perceptions for some product categories and the number of brands on consumer shopping lists vary between stores when ethnic composition is controlled. While the brand loyalty self perceptions and percent of brands on lists are similar between respondents from Stop and Shop and Beits, they differ widely from the respondents at the two other stores. Thus, the store's marketing strategy appears to have an effect on consumer tendency to use brand names independently of its customers' characteristics.

TABLE 3

BRAND LOYALTY SELF PERCEPTION AND PERCENTAGE OF BRANDS ON LIST BY STORE FOR WHITES

Product Category	Stop & Shop		Beits		Others		F Value	P
	\bar{x}	N	\bar{x}	N	\bar{x}	N		
Beer	2.5	54 ¹	2.6	13	1.4	15	4.1	<.01
Dairy	2.4	77	2.4	19	3.4	20	5.1	<.01
Beverages/Soda	2.5	73	2.2	17	1.7	19	3.3	<.05
Percent of Brands on List	19.9	77	16.8	19	32.2	20	6.7	<.01

¹The N's vary as some respondents indicated they did not purchase certain items.

SUMMARY OF FINDINGS

Data collected from shoppers at four stores indicated that the items on grocery shopping lists are approximately 25% brand names. The percentage of brand names varies from none to 68.9% with a standard deviation of 16.9% and mode of 17.5%. Variations in the percent of brand names occurs across consumers, between stores and across product categories. Half or more of the items in the categories of beer, cereals, household cleaning products, and personal care products are written as brand names. Less than two percent of the items on lists were product classes, needs were virtually nonexistent, with the majority of items being product categories.

Variations between stores could not be explained by the socio-demographic composition of their customers with the exception of ethnicity. Blacks and Hispanics used higher percentages of brand names on lists than Whites and indicated higher levels of brand loyalty for certain product categories. No other socio-demographic characteristics were associated with use of brand names or brand loyalty. Respondents from different stores demonstrated differing tendencies to use brand names on lists when the effects of ethnic composition were removed.

Limitations

There are two sources of limitations to the interpretations made of this data. (1) The limited number of Black and Hispanics in the sample made analysis of the interaction between store shopped, ethnicity, and other consumer characteristics impossible. Also their limited numbers suggests caution in using the brand loyalty self perception data and percentage of brand names on lists as estimates for Blacks and Hispanics. This data does, however, suggest that ethnic subcultural affiliation is related to use of brand names on lists and brand loyalty and invites an investigation to explain this.

(2) The use of a brand name on a shopping list may represent intense brand loyalty--Coke for soda, use of a brand to represent a product category--Kleenex, or deal proneness--inclusion of brands on sale and those for which the consumer has coupons. These are different types of consumer behaviors which reflect very different responses to the marketing efforts of firms. They cannot be distinguished by mere enumeration of the percent of brands. Thus, while the percent of brands on lists does not vary across the socio-demographic categories, except for ethnicity, the relevant consumer behaviors which are reflected in use of brand names may vary.

While this research is exploratory and has limitations, it suggests that variations in the content of grocery store shopping lists may reflect different types of shopping orientations. Several hypotheses for future research are suggested by the findings reported here.

H1 The content of shopping lists varies by consumer characteristics, specifically ethnicity.

H2 The content of shopping lists varies across grocery retailers, reflecting competitive strategies.

Further research should attempt to discern the extent to which items on lists reflect prestore decision making as an indicator of shopping orientations and susceptibility to the long and short term promotional efforts of firms.

DISCUSSION

The analysis of 129 shopping lists has several implications of interest to consumer researchers and marketers. If we assume that the vast majority of brands on lists represents a brand choice (as opposed to brand used as surrogate for product category), then at least one fourth of grocery store purchases involve prestore decision making. That a substantial percentage of brands should be listed is not surprising, given the large marketing expenditures of the food and package goods industries and their promotional strategy of preselling products. The attempt to create intense brand loyalty to the firm's brand or to dislodge established loyalties to and purchase patterns for other brands through coupons and advertised specials are designed to shape consumer choice prior to shopping and insulate consumers from in-store stimuli. As some consumers write products on lists even where brand choice is made, we may assume that the relative frequency of preshopping brand choices are even greater.

The relative frequency of brands on shopping lists is also indicative of the pervasive impact of commercialism on American culture. Recent research has demonstrated the increasing incorporation of brand symbols in cultural products from novels, plays, popular songs and comic art (Friedman 1985a and 1985b; Spiggle 1986). Artists are obviously not attempting to solve consumption problems, nor planning purchases when they incorporate brand symbols in their work. Rather, they use brand symbols to identify, satirize, idealize, or concretize the reality of their art. However,

consumers and artists are both involved in activities in which they symbolize objects in the process of externalizing consciousness.

For both the artist communicating to an audience and a grocery list maker indicating a purchase intention to self or household shopper, brand symbols represent widely known, stable, concrete objects whose images are constructed by advertising (Cf. Schudson 1984). In the absence of brands, only symbols of a more generic nature would be available for use--their referent objects more abstract, inexact, and specific attributes less precisely definable. For the consumer the existence of brands results in the availability of a wide range of choice objects to satisfy needs. At the same time brands permit consumers to truncate the information search and alternative evaluation stages of choice, or to simplify information processing in these stages.

Models of consumer choice and marketing principles emphasize that consumers do not seek products or brands, but seek to fulfill needs, solve problems, and realize the intangible benefits provided by market offerings. The virtual absence of needs on shopping lists and the dearth of product classes suggests that consumers may, in fact, seek products and brands. That is, for package goods and grocery products consumers may experience need arousal (Assael 1984) or problem recognition (Engel, Blackwell, and Miniard 1986), the process of purchase initiation in which consumers become aware of deprivation, as a defined need for a specific product or brand. Thus, it may be that consumer behavior is driven more by pursuit of concrete products and offerings than by diffuse motivations and needs whose goal objects are ill defined in the initial stage of purchase choice.

Whether or not consumers are loyal to specific brands, the marketing efforts of grocery product and package goods firms has enabled consumers to equate needs, for which precise, widely shared symbols, labels, and cultural images are absent, with concrete objects--market offerings for which these are present. Thus, the consumer when thirsty may actually experience the need as one for Coke, and not as a general motivated state whose goal object may be one of many product types, or more specifically, not even as a caffeine based, sweet, carbonated readily available chilled can of soda.

As Pollay (1985) has demonstrated, advertising has undergone a cycle in which print ads became more focused on consumer benefits, portrayed more use situations, and used more emotive rhetorical styles in the 1950s, followed by a resurgence in the 1960s and 1970s of ads with the product only, focusing on product attributes and using rational, informative textual styles. In an era in which the marketing concept is firmly established we might expect both consumers and marketers to focus on consumer needs and benefits. There is evidence from content analysis of advertisements and shopping lists that a continuing product orientation exists on both sides of exchange transactions.

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DEVIATIONS FROM A SHOPPING PLAN:
WHEN AND WHY DO CONSUMERS NOT BUY ITEMS AS PLANNED

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Abstract

Past literature deals with deviations from a shopping plan only in terms of unplanned purchasing activity. However, shortfall, i.e., when a consumer does not buy items that s/he originally intended to buy, is an equally important variable. This study explores the possible effects of two mediators, i.e., Time Pressure and Prior Knowledge of the Store Layout, on shortfall and also the reasons why it occurs.

Introduction

Grocery shopping can be best characterized as a routinized behavior. Even though consumers may enjoy the shopping experience, it is reasonable to state that grocery shopping is primarily viewed as a necessary chore that just needs to be done. To that extent, enhancing the efficiency levels of the information processing involved in executing that chore would be a desirable feature sought by consumers. In case of brand choice behavior, reliance on previously generated preferences, i.e., the affect referral heuristic (Wright 1975), would most likely increase efficiency. Similarly, the efficiency in executing the total shopping trip could be increased by following a well learned spatial script. Such scripts are products of enacting a behavior many times over. There are certain situational antecedents that would facilitate the retrieval and enactment of such spatial scripts. The purpose of this research is to define two such facilitators, i.e., Time Pressure and Prior Knowledge of the Store Layout, and study their effects on the deviations from a shopping plan.

Theory of Scripted Behavior

The central theme in the theory of scripted behavior is that consumers carry many behavioral scripts in their cognitive system, and that such scripts determine the behaviors to be enacted in often-encountered environments (Abelson 1981, 1976). It is expected that individuals synthesize the essence of a behavioral setting in the form of a script which would enable subsequent reference to frequently repeated event sequences. Enactment of behaviors which are script driven require a minimal number of cues. Hence, it takes very few inputs to trigger off a scripted routine, thereby making it less effortful to enact such behaviors.

Various concepts such as plans (Miller, Galanter, and Pribram 1960), production systems (Anderson, Kline, and Beasley 1980), frames (Minsky 1975), schemata (Rumelhart and Ortony 1977), cognitive maps (Downs and Stea 1977), and mindlessness (Langer 1978; Langer, Balnk, and Chanowitz 1978) have been proposed in the cognitive science literature. All these share some meaning with each other to the extent that they all propose information-processing mechanisms which are selective and less effortful that guide behaviors. Although all of these are suggestive of habitual behaviors, enactment of scripted behavior is different from a habitual response. The key difference is that a script is a knowledge structure and not an automatic behavior response program. A script is like a network consisting of nodes and linkages. The strength of the linkages would vary from script to script as well as over time. Scripts probably get formed from the multiple learning experiences of individuals and hence familiarity is an important element in the process of script formation.

Script Retrieval and Enactment

Mere presence of information (script availability) would not necessarily lead to its accessibility (automatic

retrieval), and the latter would be affected by many factors (Lynch and Srull 1982). One such important factor may be the motivation to retrieve the script. It has been shown that the motivational state will not only affect the information availability through increased cognitive processing (Krugman 1965; Petty and Cacioppo 1979), but also its retrieval (Mitchell 1981). Therefore, the effect of a grocery shopping script on a consumer's grocery shopping plan would have to be examined in the context of facilitators that motivate the retrieval of a script. Time pressure is one such factor that would act as a catalyst in the process of script retrieval and enactment.

Time pressure can be conceptualized as a perceived constriction of the time available to an individual to perform a task. This constriction may facilitate the retrieval of information. Bronner (1982) found that the demand for additional information was drastically reduced if the decision were to be made under time pressure. Thus, it seems that individuals rely on available information, limited as it may be, in order to make a decision, rather than invest more time in gathering additional information which may or may not enhance the "correctness" of the decision itself. Such a trade-off reflects the need for efficient and quick processing when under time pressure. Based on these arguments, one could expect time pressure to be a facilitator in the retrieval of scripts.

However, the extent to which a script can be enacted would be a function of other environmental factors such as the degree of applicability of the encoded script to the problem-solving task on hand. For example, using a script that has been learned in a familiar environment while shopping in an unfamiliar environment would not increase the processing efficiency. Incompatibility between the incoming information and the encoded script inhibits the enactment of the script (Pitchert and Aderson 1977; Kozminsky 1977). This suggests that a situation that calls for efficient processing, i.e., time pressure, would facilitate the retrieval of a script and a familiar setting, i.e., prior knowledge of the store layout, would allow for its enactment (Iyer and Park 1986).

Scripts and Purchasing Behavior

The relevant question, which forms the core of this study, pertains to the implications of a script-driven shopping behavior on purchasing behavior. Behavior that is driven by scripts is very likely to be in conformity with the norm. This is because scripts are most useful under conditions when efficient processing is required and very little attention needs to be paid to other cues in the environment. Thus, one can expect the deviations from a shopping plan to be minimal when purchasing behavior is driven by scripts. Invariably, deviation from a shopping plan has implied unplanned purchasing activity, i.e., items not on the plan that are purchased. This is probably because most of the earlier literature has been devoted to unplanned purchasing activity only (Kollat and Willet 1967; Raju 1980; Iyer and Park 1986). However, little or no attention has been devoted to the concept of shortfall. This is possibly because of the perception that influencing the amount of unplanned purchasing would lead to an increase in sales. However, shortfall is an equally important variable that influences sales. Shortfall is defined as the count of the items that a shopper intended to purchase but did not.

A trivial case of shortfall would be when the item intended for purchase was not available in the store. This is because the shopper has no option except not to purchase the item. There could be a variety of other reasons for

shortfall, such as the price of the product being too high or the quality of the product being not acceptable, and so on. These may be justifiable reasons and to the extent they can be identified, the solutions available to store management in order to prevent a shortfall are also obvious. From a management point of view, the real crux of the matter lies in identifying other external situational factors that may influence a shopper not purchasing an item that s/he had originally planned to. In other words, if one were to eliminate those cases of shortfall caused due to the non-availability of products (since it is a trivial case), and further assume that the other "justifiable" reasons were randomly distributed across different situations, then the interesting question would be to study the varying frequency of occurrence of shortfall across different situations.

Hypotheses

Given sufficient time, a shopper is highly likely to fulfill his/her intended purchases. However, when shopping under time pressure, the shopper's behavior is expected to be script driven. Enactment of scripts requires very few informational inputs from the external environment and the dominant consideration is one of efficiency. In the process, a shopper is likely not to purchase all the items on her/his original list. Hence, the first hypothesis is proposed.

H1: The amount of shortfall will be a direct function of time pressure.

When shopping in a familiar environment, there is a high congruity between the encoded information about the store layout and the actual store layout. This facilitates the routine completion of a planned shopping sequence. However, the same encoded information will not be applicable to an unfamiliar shopping environment, which may introduce inefficiencies in the execution of a well-planned sequence thereby leading to the shopper not being able to buy all the items on her/his original list. Based on this discussion, the second hypothesis is proposed.

H2: The amount of shortfall will be an inverse function of prior knowledge of the store layout.

The above two hypotheses are consistent with the principles of resource allocation. The amount of time available for shopping and the cognitive capacity can be viewed as two of the many resources a consumer brings to a grocery shopping context. When a constraint is imposed on the time resource (e.g., shopping under time pressure) or when a demand is placed on the capacity resource (e.g., shopping in an unfamiliar store), the shopper is likely to adjust her/his purchasing strategy. As a result, some shortfall is likely to occur. Further, combining the above two hypotheses, it is clear that the following two hypotheses can be proposed.

H3a: The amount of shortfall will be highest for consumers shopping in an unfamiliar store under time pressure.

H3b: The amount of shortfall will be lowest for consumers shopping in a familiar store under no time pressure.

Methodology

Design

The results described in this paper came from a larger experiment consisting of a 2x2 factorial design. The two independent variables were time pressure and prior knowledge of the store layout. Time pressure was treated as either absent (A) or present (P), whereas prior knowledge of the store layout was treated as either low (L) or high (H).

Subjects

Subjects were randomly assigned to each of the experimental conditions. Most of the subjects belonged to a consumer panel affiliated to a large northeastern University. Certain others were recruited from the staff and students of

the same university.

There were more females (78%) than males in the sample. The median income (\$24,900) of the sample is somewhat higher than the national median (\$18,000), in part, reflecting the relatively high educational level of the sample--23.5 percent had earned graduate degrees and 16.2 percent had completed college.

Experimental Task

The experimental task consisted of conducting a full replenishment grocery shopping trip. Subjects were picked up from their residence, escorted to the grocery store, and then dropped back at home. They paid for their purchases, but were given \$10 for their participation.

Before departing to the store, the interviewer made note of the items that the subject planned to purchase. This was done by asking subjects to verbalize the items that they would purchase. By not asking the subjects to write down a shopping list and by posing the question almost as an afterthought, its salience was reduced. The subtle manner in which this question was handled avoided sensitizing the subjects. Subjects were also clearly informed that they were not bound by the list and could shop in their own manner and make any decisions. They were asked to estimate the time they required to complete the shopping for the items they indicated. The time estimate included the period from the time they entered the store to the time they came to the checkout line. This estimate formed the basis for the subsequent treatment of time pressure.

Even at this stage subjects were unaware of any potential experimental manipulation. Depending on the experimental condition, they were taken to their regular "favorite" store or to some other store they had never shopped at before. If it was a new store, it was always another store from the same chain. This ensured that the store layout was different but the range of products was similar. For those who had to shop under time constraints, instructions were provided to achieve the desired level of the treatment. The interviewer then provided a revised estimate of the reduced time that was available. The reduced time estimate was derived by halving the original time estimate already provided by the subject. An earlier pilot study had revealed that halving the time estimate induced time pressure without creating a panic situation.

At the end of the shopping trip, when the subject was ready to check out, s/he was asked to respond to scaled questions on the amount of time pressure s/he felt and her/his perceived familiarity with the store layout. Then, an item by item inventory of the shopping cart was conducted and compared to the original list provided by the subject. This inventory count was used to identify shortfall, and in all cases of deviations, the subject was asked to provide a reason.

After the task was completed, those who were under time pressure were offered extra time to go on their own and add/delete to/from their existing purchases. No record was kept of this activity since the subject was allowed to do this by her/himself. Not many subjects acted on this offer. Similarly, those who were taken to an unfamiliar store were given the option of replacing all or part of their purchases coupled with an offer to take them to their "favorite" store. Only one subject took this option. Subjects were then escorted home.

RESULTS

Manipulation Checks

The actual time taken by shoppers in both the time-pressure-present (TPP) and time-pressure-absent (TPA) conditions was noted to the nearest minute. The mean times of 13.58 minutes and 31.11 minutes for the two groups are significantly different ($t=7.50, p<0.001$). After completing the shopping trip, subjects were asked to rate the amount of time pressure they felt during the shopping trip on a

7-point scale (1=No time pressure at all, 4=Moderate time pressure, 7=Very high time pressure). The difference between the two group means of 5.91 and 1.37 was significant ($t=16.11$, $p<0.001$).

On a 12-point scale¹ subjects were asked to estimate the number of times they had shopped in the store chosen for the experimental purposes. Those in the low-prior-knowledge (LPK) treatment had never shopped in that particular store, and hence the mean response for that group was zero. On the same scale, the high-prior-knowledge (HPK) group had a mean score of 8.84 (101-150 times). These two means are significantly different ($t=20.11$, $p<0.001$). After the shopping trip was completed, subjects were asked to rate their perceived familiarity with the store layout on a 7-point scale (1=No knowledge at all, 4=Moderate knowledge, 7=Very high knowledge). The two group means were 1.67 and 6.06; these are significantly different ($t=13.78$, $p<0.001$).

Hypotheses Testing

Shortfall was defined as a count of the items that a shopper intended to purchase but did not. This was operationalized as those items on a shopper's original list that were not in the shopping cart at the check-out. Implied in this operationalization is the assumption that the verbal report of the items provided before going to the grocery store represents the shopper's intentions.

Time pressure and prior knowledge of the store layout were the two independent factors, each of which had two levels. Since the actual time taken for shopping was expected to have a direct bearing on the total number of items purchased, it was used as a covariate. Shortfall-defined and measured in the above manner--was used as a dependent variable in an ANCOVA. There was a slight possibility of order of entry problem because of unequal cell sizes. The analysis was re-run by varying order of entry of the independent variables. There were no differences in the results obtained.

Actual shopping time, which was used as a covariate, was highly significant ($p<0.002$) and its coefficient (-0.055) was in the expected direction. Other important aspects of the ANCOVA results are reported in Table 1. There was no significant interaction effects, but the main effects of both the independent variables are significant ($p<0.06$ or better), thereby supporting hypotheses 1 and 2 respectively.

TABLE 1

RESULTS OF ANCOVA

Prior Knowledge	Group Time Pressure	No. of Subjects (n)	Shortfall (a)
LPK	TPA	20	1.50
LPK	TPP	16	3.63
HPK	TPA	15	0.73
HPK	TPP	17	2.65

(a) $\bar{x} = 2.120$, $p_{TP} < 0.002$, $p_{PK} < 0.058$, $p_I < 0.819$

where: \bar{x} = Mean

TP = Time Pressure

PK = Prior knowledge of store layout

I = Interaction

A planned pairwise comparison² of the mean shortfall in the LPK-TPP condition (3.63) with the mean shortfall in all other conditions was conducted. The difference between the mean shortfall in this condition and those in the LPK-TPA condition (1.50), HPK-TPA condition (0.73), and HPK-TPP condition (2.65) were all significant at $p<0.05$ level or

¹The 12-point scale used was as follows: 0=Never shopped, 1=1-5 times, 2=6-10 times, 3=11-20 times, 4=21-30 times, 5=31-50 times, 6=51-75 times, 7=76-100 times, 8=101-105 times, 9=151-200 times, 10=201-300, 11=301 or more.

²All planned pairwise comparisons were performed using a one-tailed t-test with the mean sum of square errors from the overall analysis of variance.

better. This clearly supports hypothesis 3a. In accordance with the last hypothesis, the mean shortfall in the HPK-TPA condition (0.73) was compared with those in the HPK-TPP condition (2.65) and LPK-TPP condition (3.63). The differences were significant at $p<0.005$ level or better. However, when compared to the shortfall in the LPK-TPA condition (1.50), the difference was only modestly significant ($p<0.10$). This modestly supports hypothesis 3b. Overall, one could state that all the hypotheses were reasonably well supported.

Discussion

Shortfall--when a shopper does not buy items on her/his plan--is an important phenomenon, since it represents a lost opportunity to conclude a sale, which from the buyer's viewpoint was all but concluded. In spite of its importance, it is an overlooked phenomenon in the consumer shopping literature, and most of the previous research has focused only on unplanned purchasing behavior.

As was evidenced from this study, shortfall need not occur only when there are stock-outs. In fact, non-availability of an item was not the most frequent reason for shortfall; its frequency was a little over 11 percent of the total pool of reasons (see Table 2). However, in a grocery shopping situation where repeat purchases are an important objective of overall marketing strategy, the total cost of lost sales as a result of stock-out can be extremely high. Situational parameters such as time pressure and knowledge of the store layout seemed to have some influence over shortfall.

In order to understand the nature of the influence of time pressure and knowledge of the store layout on shortfall, the reasons for shortfall were further analyzed. There were a total of fourteen reasons advanced by the shoppers; these were cited 162 times when all the responses were pooled. Seven of these reasons constituted approximately 85 percent of the total responses. The detailed breakdown of these reasons under the different experimental conditions is provided in Table 2. Space constraints prevent a more detailed analysis of its presentation.

It is obvious, nonetheless interesting, that no shopper in the TPA condition suggested that lack of time was a reason for shortfall. Equally interesting was the fact that memory failure, as a reason for shortfall, was overwhelmingly mentioned by shoppers in the TPP condition. This seems to strongly indicate that time pressure is not merely a restriction in the time available, but also seems to affect information retrieval. In other words, time pressure does not allow the retrieval of the detailed information base stored in the long-term memory; rather, it seems to switch the individual into a scriptal mode whereby holistic action sequences could be retrieved. In the process, the efficiency of the processing is enhanced but at the cost of accuracy. There is further reason to believe that the TPP condition calls for enhanced efficiency because those under the condition seem to drop their tentative plans. In other words, shoppers in the TPP condition seem to switch to a scriptal mode. One of the steps that a script adopts in the drive for increased efficiency is to overlook the goals that are tentative.

One potential reason for shortfall could be that the item was not available. However, it is possible that the specific item was really available, except that it was in a location that the shopper did not search for. In other words, these two reasons could be merely manifestations of an underlying attribution process, which itself could be a function of the shopper's perceived self-confidence in their knowledge of the store layout. Thus, shoppers in the HPK condition more often cited non-availability as a reason for shortfall than those in the LPK condition. The results were exactly the opposite with shoppers in the LPK condition citing their inability to locate as a reason for shortfall more often than those in the HPK condition. This distinction is important because in one case the shopper attributes the cause for shortfall to oneself whereas in the other case the store is viewed as the cause. In the long run, the latter attribution could hurt the image of the store.

TABLE 2

REASONS FOR SHORTFALL

Reasons for Not Buying Item on Plan	Total Freqy	Percent of Resps Cases		Time Pressure		Prior Knowledge	
				(A) Freqy (Row %)	(P) Freqy (Row %)	(L) Freqy (Row %)	(H) Freqy (Row %)
Forgot to buy	28	17.3	50.9	2 (7.1)	26 (92.9)	17 (60.7)	11 (39.3)
Could not locate	26	16.0	47.3	13 (50.0)	13 (50.0)	22 (84.6)	4 (15.4)
No time to buy (in a hurry)	19	11.7	34.5	0 (0.0)	19 (100.0)	5 (26.3)	14 (73.7)
Too expensive	19	11.7	34.5	9 (47.4)	10 (52.6)	16 (84.2)	3 (15.8)
Not available	18	11.1	32.7	8 (44.8)	10 (55.6)	3 (16.7)	15 (83.3)
Not good quality	18	11.1	32.7	9 (50.0)	9 (50.0)	11 (61.1)	7 (38.9)
Intention to buy was tentative	11	6.8	20.0	1 (9.1)	10 (90.9)	1 (9.1)	10 (90.9)
Others	23	14.3	41.9	7 (30.4)	16 (69.6)	16 (69.6)	7 (30.4)
Total	162	100.0	294.5	49 (30.3)	113 (69.7)	91 (56.2)	71 (43.8)

FIGURE 1

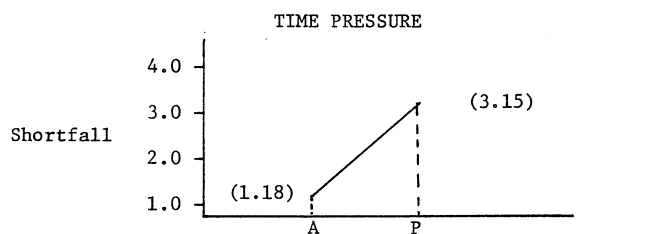
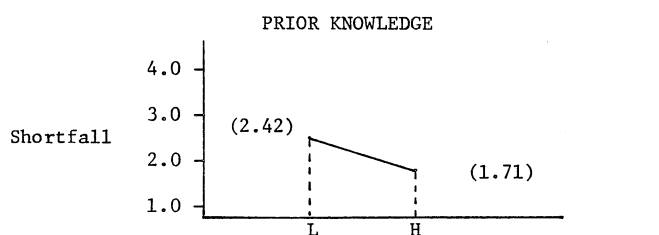


FIGURE 2



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MOOD STATES OF SHOPPERS AND STORE IMAGE:
PROMISING INTERACTIONS AND POSSIBLE
BEHAVIORAL EFFECTS

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Abstract

Consumer mood is an area of inquiry which has captured the attention of consumer researchers because it is not only a subject of theoretical value but it appears to have practical implications to a wide range of consumer and marketing issues. The purpose of this research was to test the utility of Mehrabian's mood scale combined with consumer perceptions of store image on actual shopping behavior. Very little is known about effects of mood on consumer behavior; most extant and current research effort focuses on the effects of advertising or other manipulations. Thus it seemed that a study which attempted the measurement of mood at the point of purchase would provide insight into the phenomenon itself, provide a test of the scale's external validity and offer some exploratory relationships between the constructs of interest.

Results indicate that consumer's moods may have effect on certain aspects of shopping, and that there may be significant interaction between the constructs of consumer mood and store image. Implications could be of importance to marketers, especially retailers.

Introduction

Although considerable research has focused on traditional information paradigms to explain or predict consumer behavior not much research has been concerned with the impact of affective factors on the beliefs, attitudes and behavior of the consumer. The purpose of this research is to explore some influences of consumers' moods and their perception of store image, on certain aspects of shopping behavior. Some significant findings are derived from prior research of Hirschman and Holbrook (1982), Holbrook and Hirschman (1982), Gardner (1985), and Hill and Mazis (1985) on emotions, fantasy, attitudes toward advertising, and anxiety. Current research which focuses on mood effects are usually (and pragmatically) concerned with reactions to advertisements chosen to induce particular mood states (e.g., Russo and Stephens 1986.) While such research can be conducted in a reasonably controlled setting and can add internal validity to the increasing acceptance of consumer mood research, a field survey at the point of purchase could substantially give us new insights into understanding mood effects on shopping behavior. Since findings to date indicate that mood states are a particularly important set of affective factors (Gardner and Vandersteel 1984); they may form a part of all marketing situations (Belk 1975, Lutz and Kakkar (1975); and, as Gardner (1985) suggests, may influence consumer behavior in many contexts. These would include advertisement exposure and attitude, brand loyalty, and as we suggest, other outcomes related to shopping. Thus the focus of this research is to explore the effect of both consumers' moods and their perceptions of store image on a variety of shopping behaviors.

The outcomes of this research could add to our knowledge of mood states on behavior in the actual shopping environment, suggest ways in which marketers could take advantage of (or induce) consumer mood states, and finally, help determine whether extant measurement techniques perform as adequately in the actual shopping environment as they do in mood-inducing laboratory studies.

Conceptual Framework

Previous studies of in-store behavior have suggested that

the store image, or within-store attributes, have distinct and relevant influence on shopping behavior, apart from more obvious store attributes such as price, shopping hours, product assortment, convenience of location, and service (Donovan and Rossiter 1982). Although the more objective variables have previously been reported to be higher on consumers' rankings of relative importance of store attributes (Hansen and Deutschner 1977, Jolson and Spath 1973), Donovan and Rossiter (1982) provide indications that mood states actually induced by retail store environments may affect purchase intentions. It has been noted by Simon (1982) and Kotler (1974) that there were effects of "atmospherics" in the retail setting, while others have reported effects of some uninduced aspects of ambience (e.g., nice weather -Cunningham 1979, "effective temperature" - Griffit 1970. Of course there are many aspects of an environment's physical surroundings which may influence a consumer's behavior, and the fact that a large number of these aspects are under the marketer's control "encourage optimism about the potential for inducing moods that will serve specific marketing ends" (Gardner 1985, p.291). The limitations of most previous approaches to this sort of study are 1) using store atmosphere as a component of store image; 2) conceptualizing store image as a single attribute; and 3) failure to assess how store image affects shopping behavior within the store (Donovan and Rossiter 1982). Another criticism of store image measurement has been that it usually occurs well after the in-store experience and in settings external to the store environment. As Donovan and Rossiter (1982) point out, although retailers report significant effects from image manipulations, there is a lack of supporting evidence to document these outcomes. Several possible explanations for this are:

"Store atmosphere effects are basic emotional states that (1) are difficult to verbalize, (2) are transient and therefore difficult to recall, and (3) influence behaviors within the store rather than gross external behaviors such as choosing whether or not to patronize the store"(p.35).

They continue their observations upon the difficulty of the measuring of emotional responses to store image by observing that they may be very hard to document unless their measures "occur as close in time and place to the shopping behavior and preferably within the store" (p.36). Belk (1975), Kakkar and Lutz (1975), and Lutz and Kakkar (1975) studied overall usage environments, and Donovan and Rossiter (1982) studied environmental variables in a retail setting. Note, however, that in the latter study, thirty students assessed their own shopping intentions, and there were only 66 responses. Thus, much selective interviewer bias is likely to have affected results.

The Mehrabian-Russell model (1974) offers a theoretical framework of a taxonomy of antecedents, intervening variables and outcomes, in the traditional S-O-R paradigm, although it particularly focuses on the two latter ones. This study also focuses on the theoretical link between the intervening and outcome variables. The intervening variables are mood and store image. The response variables are categorized in the Mehrabian -Russell tradition of approach or avoidance behaviors, many of which were suggested by Donovan and Rossiter (1982). They are seen in Table 1.

TABLE 1

<u>Taxonomy of Variables</u>		
<u>Antecedents (?)</u> <u>Outcomes</u>	<u>Intervening</u>	<u>Outcomes</u>
Demographics e.g., age sex sex income occupation education venturesomeness	Store Image Consumer Mood	Number of items bought in store Amount of money spent, relatively (more, same, less) Amount of time spent in store (actual and relative) How often shop this store Intention to revisit store

As Table 1 shows, antecedents have only been suggested. Demographic variables seem reasonable as antecedents, as do certain personality variables. For instance, Grossbart and other (1975) examined different personality types in sensation seeking related to shopping behavior, and this would seem to conceptually fit the model; however, further research is needed in order to establish such an integrative model- a task beyond the scope of this research.

Mehrabian and Russell propose that three basic emotional states mediate approach-avoidance in environmental situations; pleasure, arousal, and dominance (or their opposites). This tridimensional theory of emotions was proposed half a century ago by Wilhelm Wundt (in 1905), who characterized emotions in terms of pleasure-displeasure, tension-relaxation, and excitement-quietness. Factor analysis of the Mehrabian-Russell scale we used in the retail environment clearly showed dimensions of pleasure, excitement, and alertness (feeling wide awake but calm). Whereas alertness is not strictly the same as dominance, it may be that in a store, feeling alert but calm puts consumers, already in a nonthreatening environment, into a feeling of being in control. Thus we suggest the following hypotheses based on the previous discussion:

- H1: The more positive the consumer's mood, the more likely s/he is to
 (a) spend more money than anticipated
 (b) spend more time, both actual and in the store
 (c) shop in the store more often and
 (d) plan to revisit the store
- H2: The more positive the consumer's image of the store, the more likely s/he is to
 (a) spend more money than anticipated
 (b) spend more time, both actual and anticipated in the store
 (c) shop in the store more often and
 (d) plan to revisit the store

In addition, the Mehrabian-Russell model (1974) specifies a conditional interaction among emotional responses. Indeed, our evidence suggests a clear interaction effect between mood and store image with both having impact on the dependent variables.

Method

The sample consisted of 89 shoppers selected at different times of day who had just made a purchase. Stores were clothing or other specialty types where the likelihood of spending a significant amount of money was greater. In the routine purchase of an item, such as some razor blades from a drug store, it is not as likely that one's mood at the time or one's image of the store would affect shopping behavior. Different stores were used, but they all could be classified as similar in the price ranges of their merchandise.

Variables: Consumer mood was measured using the Mehrabian-Russell scale consisting of 18 items on a 7-point semantic differential scale. Cronbach's alpha for the scale was .76. Factor analysis of the scale showed three distinct factors, previously mentioned. They were pleasure-displeasure, arousal or excitement and alertness or feeling wide awake and calm.

Store image was measured using items suggested by Dickson and Albaum (1977). Thirty one items were similarly coded on a 7-point semantic differential scale and had a Cronbach's alpha of .90. Factor analysis was also performed on this scale, and the clearest to emerge were dimensions of pleasantness, excitement, and uncrowdedness. These are very much like the dimensions of mood measured and add validity to the notion of interaction between the two in a retail context.

The dependent variables consisted of single items about shopping behavior in the store. Respondents were asked the number of items purchased; whether they spent more, the same, or less than anticipated; the amount of time spent in the store; whether it was more the same or less than expected; how often per year they visit the store; and whether they intended to revisit the store.

Demographic data were collected for classification purposes only, not intended to serve as antecedents in the model. Other than the significance of occupation on spending more than anticipated ($r = .24, p < .01$); and the indication, not surprising, that women shopped these stores more often than men, there were no noteworthy differences either in the intervening or outcomes due to demographic variables. Table 2 shows the correlation matrix of the intervening and outcome variables with the demographics.

TABLE 2

<u>Correlation Matrix of Demographics, Intervening Variables, and Outcomes</u>						
	<u>Store</u>					
	<u>Mood</u>	<u>Image</u>	<u>age</u>	<u>sex</u>	<u>occupation</u>	<u>income</u>
Mood	1	.63*	-.07	-.11	-.22	.11
Store Image	.63*	1	-.01	-.16	-.13	.12
Number of items bought	.32*	.31*	.23*	.02	-.18	-.04
Amount \$ spent vs anticipated	.22*	.21*	-.06	.07	.24*	.01
Time spent (actual)	.07	-.03	-.30*	.14	-.02	-.02
Amount of time vs anticipated	-.02	.05	.09	.07	-.15	-.09
How often shop	-.18	-.04	-.03	.19*	.01	-.09
Revisit store?	.13	.11	.01	-.12	-.12	.16

One variable which does have impact on the number of items bought ($r = .23, p = .000$) and paradoxically, the amount of time spent in the store (less; $r = -.30, p = .000$) was age. This finding has intriguing implications which should be further studied.

As the table shows, correlational evidence is that consumers' moods are positively related to store image, number of items bought, and the amount of money spent. With a larger sample, the variables may show an even stronger relationship, and further research should be conducted to assess this. This table also shows similar correlations between the outcomes and store image indicating that the more positive the consumer's image of the store, the greater the number of items bought and amount of money spent.

Because it was theoretically specified that there was interaction between mood and store image, and because the correlation between the two constructs was high, we performed partial correlation analysis on the outcomes controlling for each of the intervening variables. The results of this analysis are shown in Table 3.

TABLE 3

Partial Correlation Analysis

Outcome Variables	Zero order Correlations		Controlling for	
	Mood	Store Image	Mood	Store Image
Number of items bought	.77 ^a	.56 ^a	.15	.64 ^a
Amount of money spent	.49 ^a	.24 ^b	-.09	.45 ^a
Actual time spent	.21 ^c	.05	-.11	.26 ^b
Greater than time anticipated	.21 ^c	.05	-.01	.17 ^c
How often shop here	.12	.09	.02	.08
Revisit intention	.07	-.02	-.09	.11

^a p < .001^b p < .01^c p < .05

Our results indicate that being in a positive mood may reinforce, even create, a good shopping mood which positively affects one's perception of store image. This has tremendous possibilities for retailers, especially those in shopping malls or others in close proximity selling similar merchandise. Differentiating one's store could become a true mixture of art and science.

Although the findings are promising, it must be remembered that people engage more often in helping behavior when in a better mood than not (e.g., filling out a questionnaire), and that the results must be interpreted accordingly. This type of bias is likely to be present in any type of survey, especially in the case of personal store intercepts and telephone interviewing. But other than that, there is no reason to expect any more bias and nonresponse due to the respondent being in a bad mood in this study as in any other using the intercept technique. Another limitation includes the possibility that consumers may deliberately choose to shop in stores that induce a positive mood. Furthermore, since the sample size was small and fairly localized it would be difficult to generalize. Finally, the question of which antecedents to use needs further investigation to develop variables of this nature and test the entire model. If this model could aid in our understanding of the complex influence of emotions on consumer behavior while offering pragmatic guidelines to marketers, especially retailers, it would certainly be worth pursuing in future research.

Results

The results of our findings are that the scales used were valid in the retail setting, with good reliability scores and high factor loadings on theoretical expectations. The finding that the main factors were quite similar could be due to the theoretical notion of their interrelationship. This is also evidenced in the high zero-order correlation score between the two and in the effects on the dependent variables when each intervening variable was partialled out.

Thus, although zero-order correlation coefficients showed support for more "approach" behavior the better the consumer mood and perceived store image, the influence became even more interesting when the effects of each other were controlled. Mood clearly has an impact on all the behaviors studied as shown by Table 3. All correlations became insignificant when controlling for mood.

The analyses revealed support for several of the hypotheses. As Table 3 shows, the mood of the consumer may have influence on the number of items bought in the store, spending more money than originally anticipated,

and more time than intended spent in the store. Store image was also related to number of items bought and amount of money spent; however, when the effect of mood was controlled for, these relationships lost significance. Although less than half the outcomes were found to be related to the emotional states measured, the fact that some shopping behavior could be affected by consumers' emotional states is quite interesting, and further research using a larger sample and antecedent variables for the complete model should be conducted.

Discussion and Implications

This study lends credence to the often anecdotal retailer evidence that both consumers' moods and their image of the store have effect on buying behavior. Extending Donovan and Rossiter (1982), we conducted the study not on behavioral intentions but on actual behavior just after it occurred in a natural retail setting. The study indicates that a consumer's mood may influence his or her shopping behavior after the decision to shop has been made. Thus the extent to which a consumer spends more than s/he originally expect may depend somewhat on marketer-dominated stimuli. As Gardner (1985) points out, "although consumer's moods are often affected by factors beyond a marketer's control, moods can be greatly influenced by seemingly small aspects of marketer behavior, e.g., a salesperson's smile" (p.281). At the point of purchase there are many ways to make a consumer feel "better" by music, colors, salespeople training, and all those differentiating factors noticed long ago by Wundt (1905) in general environments and by Edward Chamberlin (1933) in the economic and marketing environment.

Of course this research is exploratory and presents only correlational results, yet the findings seem important enough for marketers to note, especially if small capital investments are all that are necessary to positively affect consumers' moods and their store image. For example, changing the store's light level or playing music which would appeal to the clientele would be well worth the effort if it enhanced consumer's image of the store and simultaneously positively influenced consumers' moods.

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THE BUYING CENTER IS DEAD,
LONG LIVE THE BUYING CENTER

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Abstract

It is customary to announce the passing of a monarch and naming of his successor in a manner similar to the above title. In a similar vein, we believe that the "group", which currently provides the theoretical framework for the buying center, has run its life cycle and should be replaced by the "network" concept. Thus, the institution would live on with a new role occupant.

Introduction

The seminal work of Robinson, Faris, and Wind (1967) focused organizational buying researchers' interests on the relationships among "buyers" as well as "users" and "others". Subsequently, "others" (c.f. Webster and Wind 1972; Calder 1977; Bonoma 1982) have been delineated to include a number of specific roles. The number of actors occupying these roles and their relationships have come to be known as the buying center. The notion of "group" or "small group" has, either explicitly or implicitly provided the conceptual underpinning's for the buying center. Whereas we believe this collectivity of actors and their relationships should endure as a useful conceptual framework, we believe that approaches to studying it based on "group" conceptualizations should be replaced by "networks". Our arguments are based on the observation that the "group" paradigm, in terms of theory and method, does not adequately address important organizational buying behavior issues. For example, group approaches have not gotten us beyond the classificatory Buygrid (Robinson, Faris, and Wind, 1967) approach to decision influence. Terms such as influence, power, authority, and involvement have been confused with resulting measurement difficulties (Silk and Kalwani 1982), and there are no theoretical explanations for why influence varies by buyphase and product type.

It is not surprising that "group" researchers have provided little guidance for these problems as their interests are quite different. For example, Zander (1986), a leading group researcher, states that his focus is on an enduring body with continuing characteristics such as requirements for membership, a name, a charter, and officers. These requirements hardly fit the description of a buying center. As a result, concepts that are heavily researched by group theorists, such as leadership, have limited usefulness in understanding purchasing processes.

There are, of course, many definitions of groups, some of which may approximate some buying center descriptions. However, the majority of buying centers would not be recognized as being a "full fledged group". In an extensive review, Cartwright and Zander (1968) conclude that group members:

- 1) engage in frequent interaction
- 2) define themselves as group members
- 3) are defined by others as belonging to the group
- 4) share norms
- 5) participate in an interlocking role system
- 6) identify with one another
- 7) find the group to be rewarding
- 8) pursue promotively interdependent goals
- 9) have a collective perception of unity
- 10) tend to act in a unitary manner toward the environment

Our attention will now turn to approaches and problems in marketing and organizational buying. The next section will show that research based on the above underlying beliefs is apt to miss the mark.

Group Theory and the Buying Center

It is widely recognized that the Buying Center has not lived up to its expected potential. Periodic appraisals of organizational buying behavior and the Buying Center (Bonoma, Zaltman and Johnston 1977; Bonoma and Zaltman 1978; Wind 1978a, 1978b and Johnston 1981) have all produced similar criticisms and recommendations without producing subsequent results. But, in each case, the Buying Center's potential utility has gone unquestioned. Representative of this position is Bonoma and Zaltman's (1978) claim that despite little progress, the Buying Center concept is necessary and fruitful and is theoretically relevant and substantively innovative but needs to be moved from its theoretical status to one which can be practically used. In this regard, problems such as the operationalization "group" rather than "individual" constructs must be overcome. An alternative approach to fixing up the group concept however is to examine the viability of the concept itself.

Cyert, Simon, and Trow's (1956) case study of a purchase revealed minimal overlap in the members who attended meetings. In short, there was minimal interaction, contrary to the first group characteristic previously listed. In fact, a formidable task that practitioners face is promoting interaction since some buying centers are not given formal status (e.g. recognition, membership) and may never meet. Without formal status and interaction, group rewards are not possible, contrary to group characteristic seven mentioned above. Even if the group has formal status, key actors in the purchasing decision may not define themselves as group members, contrary to group characteristic two. For example, the current CEO of General Motors personally influenced the steel commodity management team's decision to purchase domestic steel of lower quality and higher price than that available off shore. Yet, the seller would not consider the CEO to be a member of the team. Thus, casual observations tend to discount the usefulness of group member characteristics one, two, and seven in buying situations.

Extensive snowballing is often necessary to identify buying group members (Moriarty and Bateson 1982) as the lack of frequent interaction prevents an individual from enumerating the members. Thus, researchers actually force a group to exist as a result of method since members do not adhere to characteristic three.

Sheth's (1973) well known model of organizational buy behavior essentially posits the existence of conflict and political resolution due to the specialized nature of the different business functions represented in the buying center. In short, different functional areas attempt to sub-optimize for the organization as each has its own values, reward system, and perception of reality. This view negates characteristics four, six, nine, and ten. Having left only two (five and eight) of the ten group member characteristics unchallenged regarding their usefulness in organizational buying, it seems safe to explore conceptual alternatives.

Network Theory and the Buying Center

Purchasing Rules

The two characteristics unchallenged above do not depend on the other eight to be useful. An interlocking role system and promotively interdependent goals are concepts also imbedded in structural role theory. Consequently, our attention turns to purchasing roles.

Roles are expectations about sets of behavior that other people communicate to the occupant of a particular

position (Katz and Kahn 1966). Thus organizational roles represent a system of relationships between members. A number of roles have been consistently identified as being assumed by purchasing participants. The buying center has been defined as being composed of five roles: the buyer, the decider, the influencer, the gatekeeper and the user (Webster and Wind 1972). Various references have been made to some sort of boundary role in the purchasing process (cf. Spekman 1979, Wind and Robertson 1982). Gronhaug (1976) discussed the initiator and Bonoma (1982) and Krapfel (1982; 1985) identified the inside advocate as a major purchasing role. The opinion leader, associated with word of mouth/two-step hypothesis, is another important purchasing role. This list is far from comprehensive. Calder (1977) suggested 25 or so roles which might be operational in purchasing situations, such as the information giver and seeker, the follower, and the coordinator. Little theory exists to explain who assumes these various roles or how, although there is sufficient anecdotal evidence to verify their existence and importance. For example, Pettigrew (1975) was able to show that a computer purchase decision outcome was a direct result of the gatekeeping activities of one person who had a strong preference for one supplier and who, to ensure that his preference be chosen, prevented other suppliers from making contact with the decision makers.

Role theory is based on the notion of networks since any group is not isolated but rather is embedded non-independently in a larger social system (Fombrun 1982). Consequently, our attention now turns to networks.

Networks

In the abstract, a network can be defined as a set of nodes or units and the relationships (or lack of) between them. Depending on the research question, networks can be analyzed at multiple levels including individual nodes, partial networks (dyads, triads and other system subsets), and the total network system. In nodal analysis the individual is always considered in relation to others. The notion of a network is common to many disciplines and, despite definitional differences both within and between fields, all contain a core conceptualization consistent with that presented above. The notion of a network is also compatible with everyday usage of the term as "An interconnected or interrelated chain or group or system," (Webster's Third New International Dictionary of the English Language).

Networks are common to electrical engineering and to project planning in operations research. Their theoretical aspects are, however, largely mathematical and less useful to this paper than various social science usages. For example, a communication network "consists of interconnected individuals who are linked by patterned communication flows," (Rogers and Agarwala-Rogers 1976, pg. 110). In this case, the relational content is uniplex. That is, communication is the only type of relation considered.

In organizational behavior the network concept appears in tandem with network analysis (e.g. Tichy, Tushman and Fombrun 1979; Lincoln 1982; and Fombrun 1982). As Tichy and Fombrun (1979) note, network analysis has made few substantive contributions to the organizational behavior field, in part because of the incomplete conceptualization of networks. To the extent that networks are treated conceptually in this literature, the works of sociologists and social anthropologists (hereafter referred to as social anthropologists) have served as reference points.

From this group comes the most useful discussion of what constitutes a network (e.g. Barnes 1954; Bott 1956; Nadell 1964; Mitchell 1969; and Boissevain 1974). In contrast to communication networks, social networks are usually multiplex, or contain a number of relations including affect, kinship, gossip, joking, communication, or

influence. Bott (1956) and Boissevain (1968) are explicit in differentiating networks from groups by noting that in networks not all individuals have social relationships with one another as would be expected in formal groups. To Barnes (1954), "Each person is...in touch with a number of people, some of whom are directly in touch with each other and some of whom are not...I find it convenient to talk of a social field of this kind as a network," (pg. 43). To Mitchell (1969), a network is a "specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behavior of the persons involved," (pg. 2). Finally, to Nadell (1964) a network refers to the interlocking set of relationships whereby the interactions in one relationship determine those occurring in others. Of importance in these last two definitions is the notion that to understand behavior, it is insufficient to look at single dyadic relationships. Instead it is the patterns of the linkages that provide an explanation of social behavior.

Buying Networks

To summarize the discussion thus far, two major arguments have been presented. First, the group concept does not adequately capture the nature of organizational buying behavior. Second, the concept of a network would address issues not covered by the group concept. The purpose of this section is to introduce the Buying Network concept as an alternative conceptualization of the buying center.

A Buying Network may be formally defined as the set of individuals involved in a purchase process, over a specified time frame, and the set of one or more relations that link (or fail to link) each dyad. The precise content of these relations may vary with the Buying Network as defined by the particular research problem. They remain unspecified in the general definition, but might include such relations as influence and communication. In addition to having metaphorical properties, the Buying Network is an analytic tool for explaining organizational buying behavior (Mitchell 1969). That is, the Buying Network fits into a general model that views organizational buying as organizational behavior, and it hypothesizes that Buying Network properties are a function of a set of organizational and purchase decision characteristics. Then, purchasing decisions, including their outcomes, are explained as a function of Buying Network properties.

Network properties are usually considered in terms of two dimensions--interactions, and structure or morphology. With minor modifications Buying Network properties draw on Harary, Cartwright and Norman's (1965), Mitchell's (1969), Boissevain's (1974) and Tichy and Fombrun's (1979) schemes. Before further detailing these two dimensions, two general comments about Buying Networks are appropriate. First, the boundaries drawn around networks are somewhat artificial. Social Anthropologists often incur major conceptual and methodological difficulties in determining where to bound their systems. Network analysts can draw semi-artificial organizational boundaries but, even so, are often faced with unwieldy amounts of sociometric data. Fortunately the problems are less severe in Buying Networks since the system is limited by definition to a subset of the organization and a smaller number of relations. However, the issue does arise as to whether it is appropriate to include Buying Network members beyond organizational boundaries. For example a lawyer, consultant, or accountant from outside the firm might have decision involvement, directly or indirectly. Conceptually, they are members of the network.

Secondly, nodes can represent roles, rather than named individuals. An organizational role is defined by structural role theory as the position(s) and task(s) assumed by a particular actor (Oeser and Harary 1962, 1964). Thus, we have come full circle to the purchasing roles

discussed above. Since network terms and characteristics are discussed elsewhere in this session, we will proceed directly to examples.

Buying Network Illustrations

The notion of a Buying Network and some of its properties can be clarified with a hypothetical and qualitative example. Admittedly the networks are simplistic and the issues of date collection are ignored for the purposes of the illustration. None the less, the example should help to indicate the concept's potential.

Consider the following problem. A manufacturer of personal computers is aggressively developing a market for its management information system (MIS). While the sales representative in a particular territory knows of several companies who intend to purchase an MIS, competition is intense. For this example, consider two potential buyers who are quite dissimilar. Firm A has a well defined purchasing policy in which the purchasing department controls the organization's seller-contact while Firm B has no stated purchasing policy. How can the sales representative decide how to most effectively apply his or her firm's marketing communication strategy to A and B? To understand the roles assumed in the process, the information flows, and the influence patterns, the representative identified and analyzed the firms' Buying Networks.

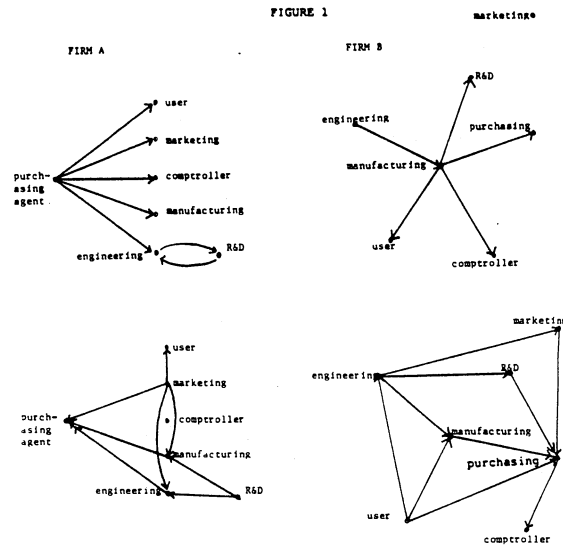
First, the communication networks are considered (see top of Figure 1). While many communication networks are bi-directional, the relationships involving the sending and receiving of source information are often uni-directional. Figure 1 illustrates Firm A's and B's respective communication networks. Visual inspection indicates that a seller-communication directed at a particular functional role, for example the purchasing agent, is likely to follow different paths. In A, the information could be passed along to the user (in the corporate planning office) as well as the other network members. In B, it would go no further than purchasing. On the other hand, a communication to engineering could reach every other member except marketing which is totally isolated. Thus, in terms of network member reachability from purchasing, all other points in A can be reached by one step except R&D while no point in B is reachable from purchasing.

Although the points in the influence network (see bottom of Figure 1) are in the same relative positions for comparison purposes, the patterns differ significantly from the communication networks. For these purposes, influence was defined relative to choosing a source for the MIS. Whereas in A, the purchasing agent has informational or gatekeeping control of the process, the influence network reveals that the purchasing agent has no ability to dominate the sourcing decision. It appears that marketing is the key player. In addition, both manufacturing and engineering are influenced by both marketing and R&D, and are able to influence the purchasing agent. From the seller's perspective, there are clear diagnostics. Although initial contact must go through the purchasing agent, it will benefit the seller to gain the interest and support of marketing and R&D by appropriately tailoring the marketing communications. Notice that these diagnostics are not available without the network analysis.

Not surprisingly, the purchasing agent is strongly influenced in B. The purchasing agent is also the decision maker so that his/her decision will be a function of the other's preferences. In order for the seller to be successful, he or she must gain the support of the user and engineering, if not marketing and R&D. In comparing A and B, it becomes obvious that both the communication targets and the messages must be adjusted to their individual processes and characteristics.

It may seem that the graphic representations, although visually pleasing, are cumbersome. However, the diagrams

can also be all represented by matrices and thus are amenable to matrix manipulations. There are also several computer algorithms available for analyses of networks. It may also seem that the process of constructing individual networks is tedious, but an ultimate goal of employing networks is to incorporate them into a larger model of buying behavior so as to achieve some amount of generalizability and decision prediction based upon an understanding of the process. In time, it is hoped that certain types of Buying Networks can be identified and used for both academic and managerial purposes. We have presently engaged in such a program of research. At present, the senior author's doctoral thesis contains a model of organizational buying influence based on network concepts which will be empirically tested.



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SOCIAL NETWORK ANALYSIS: EMERGENT VERSUS PRESCRIBED
PATTERNS IN ORGANIZATIONAL BUYING BEHAVIOR

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Abstract

Adopting a social network perspective, this paper argues that insights into organizational buying behavior can be secured by examining the work flow and communication network operative during ongoing purchasing activities in the firm. Social network analysis provides a method for studying the structural dimensions of individual influence within an organizational context. By focusing on recurring patterns of behavior, the present conceptualization represents a departure from past organizational buying center studies which explore the influence and communication patterns surrounding a particular purchasing decision.

Introduction

Network analysis has been employed by anthropologists to study kinship and community ties (e.g., Boissevain 1974), by social psychologists as an approach to analyze communication patterns in small groups (e.g., Leavitt 1951), by sociologists to study opinion leadership and diffusion of innovation (e.g., Coleman, Katz and Menzel 1957), and by consumer behavior researchers to examine brand congruence in interpersonal relations (e.g., Reingen et. al 1984). Recently, network analysis has been offered as a method for examining the emergent social structure in organizations (Tichy 1981). This paper advocates network analysis as a method for exploring the structure of influence patterns during ongoing organizational purchasing processes.

The discussion is divided into three parts. First, a review of alternative conceptual approaches to the study of organizational buying behavior is provided. Also included is a summary of findings from past research studies that examined individual influence in the organizational buying process. Second, a network perspective of organizational buying behavior is advocated. This conceptualization argues that a social network view is especially appropriate in exploring the structural dimensions of intraorganizational influence during organizational purchasing processes in the firm. Third, selected propositions issuing from this formulation are highlighted.

Conceptual Perspectives of Organizational
Buying Behavior

Anderson and Chambers (1985) advocated a reward/measurement model of organizational buying behavior. The central assertion of this model is that organizational buying behavior is best understood as work behavior. Since organizational members are rewarded for contributing to organizational goals, the model rests on the proposition that the behavior of organizational members is determined largely by the way in which their activities are measured and rewarded. Thus, the approach emphasizes the role of reward and measurement systems in motivating purchase process participants.

The model also includes a group consensus component, which delineates a process of group interaction and consensus formation. The focus here is on exploring the particular mechanisms which function to override the reward/measurement systems and social influence processes of the primary work units. Within the buying center, such mechanisms may include social influence, group rewards, coalition formation, and hierarchical decision making.

Following a contingency-related model, Spekman (1977, 1978) conceived the buying center as a "decision unit" whose members are involved in making procurement-related

decisions. Thus, the structural properties of the buying center can be explored by examining the relations of each buying center member with some or all of the other members. Thus, the buying center exists as a communication network which may not necessarily derive its structural configuration from the formal organization but rather from the regularized patterning of interpersonal communications that typify the industrial buying decision process. The structural configuration of the buying center serves to define its decision-making potential. Likewise, particular structural dimensions of an organization, such as its size or degree of centralization, would presumably influence the concentration of authority, the nature of the work flow, and communications among buying center members.

Spekman and Stern (1979) examined the relationship between various structural dimensions of the buying center and environmental uncertainty. Drawn from organizational theory and macrosociology, the structural dimensions included centralization, rules and procedures, participation in decision making, and division of labor. The results indicated that increased environmental uncertainty appeared to lead to an increase in the level of participation in decision making. In turn, the relative influence of the purchasing agent rose as the level of environmental uncertainty increased. Illustrative findings from other studies which have examined involvement and influence in the buying center are presented in Table 1.

TABLE 1

INVOLVEMENT AND INFLUENCE IN BUYING CENTER:
ILLUSTRATIVE FINDINGS

Study	Major Findings
Strauss 1962	Purchasing agents engage in lateral intraorganizational relationships to enhance their influence.
Wind 1971	Buying center members tend to respond to formal and social rewards of other buying center members in interpersonal relationships.
McMillan 1973	Nonpurchasing members (e.g., scientists) had more perceived influence on vendor selection decision than purchasing agents.
Patchen 1974	Respondents disagreed as to most influential individual in product type decisions. Bases of influence did not neatly fit into French and Raven (1959) categories.
Pettigrew 1975	Individuals performing gatekeeper role control information flows, thus becoming influential in buying process.
Grashof & Thomas 1976	High degree of self-inflation of perceived influence, which was consistent throughout buying process.
Cooley, Jackson & Ostrom 1977	Relative power differences between engineering and purchasing functions.
Wind 1978	Importance of buying roles depends upon phase of decision process and size of organization.

TABLE 1, continued

<u>Study</u>	<u>Major Findings</u>
Spekman & Stern 1979	As buying participants perceive greater environmental uncertainty, more power is attributed to purchasing agent.
Thomas 1980	Decision maker's evaluations of products are influenced by authority, stature, or expertise of others, but depend upon decision maker's position, degree of conflict, and specific product features.
Silk & Kilwani 1982	Decision participants within an organization agree on who participates in purchase decisions, but disagree on the relative influence of those involved.
Lilien & Wong 1984	Level of involvement varied inversely with organizational size. Users involved earlier than managers in decision stages.
Jackson, Keith & Burdick 1984	Relative influence was constant across buyclass but varied across product types and purchasing decision types.

Johnston and Bonoma (1981) examined the buying center, operationalized as a communications network, against four organizational structural variables (size, centralization, formalization, complexity) and three purchase situation attributes (novelty, complexity, importance). The specific communication network properties explored in the study included: (1) vertical involvement (how many levels of the organizational hierarchy exerted influence on the purchase); (2) lateral involvement (how many different departments and divisions exerted influence on the purchase); (3) extensivity (how many individuals were involved in the purchase decision process); (4) connectedness (the degree to which the participants in the purchasing process were linked with each other by communication flows); and (5) centrality (the sum of the purchasing manager's sent and received communications, weighted by the number of buying center members). The results indicated that capital equipment decisions involved more levels of corporate management, more departments on the same level, more individuals, and less communication than industrial services. The purchasing manager's centrality did not differ significantly between the two types of purchases: goods versus services. Overall, this research suggested that both the structure of the organization and the specific purchase situation affected the buying center's dimensions. The importance of the purchase situation and the degree of organizational formalization had the most significant effects.

Calder (1977) proposed that insights into organizational buying behavior could be secured by drawing upon role theory. Structural role theory considers three elements: the individuals, the positions that people occupy in the organization, and the tasks that constitute the operational units of workflow through the organization. Using digraphs (directional graphs), Calder presented the results of an exploratory study which traced the procurement of office equipment within a financial institution. The analysis generated a pictorial representation of persons, positions, and tasks involved in the purchase, and revealed information concerning workflow, assignment of persons to positions, and relationships between the position and task elements. Johnston (1981) notes that structural role analysis provides ". . . a useful conceptual framework for capturing the micro-level relationships which lie at the core of the buying center concept" (p. 85).

Bristor (1985) argues that the concept of a network represents significant potential for modeling various marketing

phenomena, including organizational buying processes. She asserts that the buying center concept implies a group level of analysis which is inappropriate for the study of organizational buying behavior. For example, individuals in the buying center may not interact with every other buying center member or may not perceive themselves as belonging to a group. By contrast, the network perspective formally accounts for the fact that the individual is embedded in a social system of dyadic relationships. The buying network is offered as an alternative to the buying center concept. Bristor (1985) defines a buying network as ". . . the set of individuals involved in a purchase process, over a specified time frame, and the set of one or more relations that link (or fail to link) each dyad" (p. 221).

A Network Perspective of Organizational Buying Behavior

Emerging perspectives of organizational buying behavior emphasize the importance of examining the complex communication and workflow patterns that encircle the purchasing process. Webster and Wind (1972) note that the communication system or network within the organization ". . . influences the behavior of members of the buying center by performing the functions of informing, commanding and instructing, persuading and influencing, and integrating the performance of individual actors" (p. 57). In essence, all organizations are communication networks held together by the flow of information (Zaltman, Duncan and Holbek 1973).

This paper suggests that particular insights into organizational buying behavior can be gained by exploring the structure of the purchasing or procurement process from a social network perspective. Consistent with this perspective, the analysis centers on the workflow and communication network operative during ongoing purchasing activities in the firm. Thus, the focus is on the stream of information and resource flows that characterize ongoing purchasing processes in the organization. Such a perspective of organizational buying behavior is consistent with Weick's contention (1969) that organizations consist of patterned, repeated interactions among social actors. By focusing on recurring patterns of behavior, the present conceptualization represents a departure from past organizational buying center studies which explored the influence and communicative patterns surrounding a particular purchasing decision.

Organizational Buying Structure

The structure of an organizational component, such as the purchasing function, is found in the program that it adopts to govern the behavior of its members (March and Simon 1958). The development and maintenance of relationships within and between organizational components are exhibited in the flows of information and resources (work, money) among positions. Thus, an assessment of the resource and information flows provides an important process perspective of the transactions that occur between organizational components and individuals involved in the organizational buying process. Network analysis can be used to assess these relationships and distinguish four types of relations in organizational contexts: (1) exchanges of goods or services; (2) exchanges of affect (liking, friendship); (3) exchanges of influence (power); and (4) exchanges of information (Tichy 1981).

A network view is especially instrumental in exploring the structural dimensions of intraorganizational influence. Organizational structure can be defined ". . . as the enduring characteristics of an organization reflected by the distribution of units and positions within an organization and their systematic relationships to each other" (James and Jones 1976, p. 76). In turn, the specific work that organizations divide among subunits is further divided among individuals, and some individual positions will clearly be more powerful than others (Brass 1984).

Consistent with a network perspective, organizational

structure may result from formally prescribed positions or from emergent patterns of behavior. To illustrate, an organizational buyer may engage in information exchanges that do not conform to formal communication channels or may informally modify the prescribed workflow in accomplishing a particular purchasing task. As these informal interactions become recurring patterns of behavior, a further element of structure is added to the organization.

In advancing a structural perspective on intraorganizational influence, Brass (1984) notes: "An employee's structural position within the organization is the result of the particular combination or interaction of both formal and emergent interdependencies. Thus, the organization can be conceptualized as networks of interrelated structural positions, with individual employees occupying these relational positions" (p. 519). A number of theorists (Kanter 1979, Perrow 1970, Pfeffer 1981) have concluded that power or influence is basically a structural phenomenon.

Exploring Individual Influence

Network theory holds that relative power and influence can be derived from patterns of social relations (Burt 1977, Galaskiewicz 1979). This perspective is compatible with power conceptualized in relational terms. For example, A's influence over B is related to B's dependency on A for needed resources (Emerson 1962, Wrong 1979). Additionally, individuals or groups that control needed resources create dependencies from others (Crozier 1964, Hickson et al. 1971, Thompson 1967). Relatedly, research supports the proposition that structural centrality is related to influence (Leavitt 1951, Mulder 1960). Moreover, research suggests that individuals who are centrally located in a network display high degrees of cohesiveness and low degrees of dependency (Alba and Moore 1978, Kadushin 1968, Turk 1977).

Empirical results from two recent intraorganizational influence studies support the linkages between social network structural relationships and individual influence levels. First, Blau and Alba (1982) found that individuals are empowered by unit participation in organization-wide communication networks. Also, to a lesser degree, individuals were found to be more powerful if they developed contacts external to the organization. Second, Brass (1984) observed that relative positions of employees within workflow, communication, and friendship networks strongly related to influence as perceived by both supervisors and nonsupervisors.

Organizational Buying Networks and Individual Influence

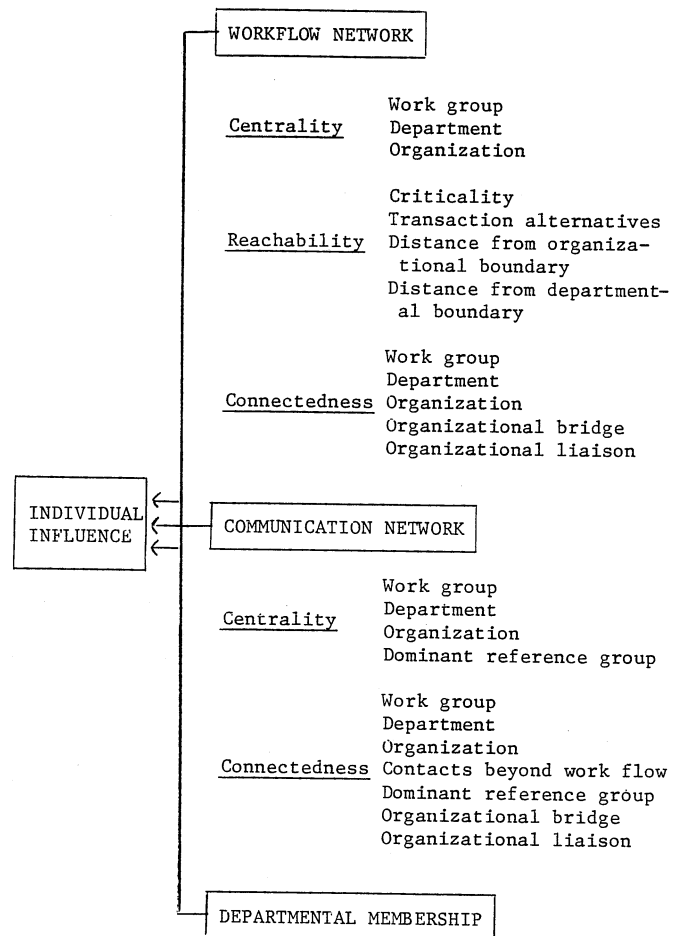
The structural perspective of intraorganizational influence advanced by Brass (1984) provides a framework for: (1) exploring individual influence patterns during recurring organizational buying-related activities; and (2) describing buying processes in terms of the relational and structural properties of social networks. Key components of this framework are highlighted in Figure 1.

Influence is defined as the ability to affect purchasing-related decisions in a direction favorable to the perceived interests of an individual. Workflow networks are the paths that provide for the exchange of task goods or services while communication networks transmit job-related information. Within this formulation, departmental membership is considered an individual attribute that affects perceived influence. Likewise, the structural position that an individual occupies within the social networks may contribute to and be indicative of that organizational member's influence during recurring buying decision processes. Observe from Figure 1 that consideration is given to three structural network dimensions:

- (1) centrality is the number of direct paths between an individual and the other participants within the network;
- (2) reachability is the number of alternate direct or indirect paths between an individual and the other

- participants within the network;
- (3) connectedness is the average number of relationships that an individual forms with others within the network (Knoke and Kuklinski 1982).

FIGURE 1
ORGANIZATIONAL BUYING BEHAVIOR:
A STRUCTURAL PERSPECTIVE OF INDIVIDUAL INFLUENCE



Linking these network properties to organizational buying influence patterns suggests a number of research propositions.

Centrality

- P₁ Centrality in the organizational buying workflow network is positively associated with influence.
- P₂ Centrality in the organizational buying communication network is positively associated with influence.

Brass (1984) found that access to and control of work flows and work-related communications in the work unit, department, and organization are related to individual influence. In addition, Fombrun (1983) found that the network centrality of an individual is a significant determinant of perceived power in an R&D department.

Reachability

- P₃ Greater criticality of the position occupied by an individual within the organizational buying network is positively associated with influence.

Criticality has been found to be positively associated with influence among organizational subunits (Hinings et al. 1974). Pfeffer (1981) and Mechanic (1962) also proposed that irreplaceability can be a source of power. Brass (1984) found that individuals who occupied positions

vital to the continued exchange of task goods or services were perceived influential. Since organizational buying involves individuals representing different functional units, occupying a position that lies on the only reachable path for work exchanges empowers the individual relative to other network members. For example, if an engineer has sole product approval authority, clearly that network position bestows that individual with influence during continued work exchanges with a buyer.

P₄ A larger number of transaction alternatives available to an individual within the organizational buying network is positively associated with influence.

An individual whose network position allows for several alternative paths for his/her outputs obviously has minimal dependence on any one path. Indeed, Brass (1984) found that the number of alternatives available to an individual was positively associated with influence.

Connectedness

P₅ Connectedness in the organizational buying communication network is positively associated with influence.

Connectedness refers to the average number of relationships that an individual forms with others within the network. The ability of an individual or unit to coordinate and integrate (that is, connect) is related to intraorganizational influence. Blau and Alba (1982) found that the integration of a work unit within organization-wide communication networks was the basis of individual power. Likewise, Bacharach and Aiken (1976) found support for their hypothesis that greater participation in the communication network provides an individual with greater influence during decision making.

P₆ Access to the dominant reference groups in the organization is positively associated with influence.

Individuals who interact with the most influential members of the firm would be perceived as having an impact on key decisions. Access to this particular group may provide an individual with valuable information, resources or support. Indeed, Brass (1984) identified a dominant group based on (1) their personal interaction patterns and (2) their high influence ratings. His results indicated that criticality, transaction alternatives, and access to their dominant group showed significant positive relationships with perceived influence.

A Concluding Note

By analyzing organizational buying influence during ongoing and recurring purchasing processes, the realities of organizational decision making within a firm can be explored. This perspective considers organizational buying activities to be generally interrelated and inseparable. Organizational members representing different functional departments are investigated by exploring their purchasing-related workflow and communication patterns. Such an approach is consistent with the organizational buying behavior research tradition. Several organizational buying behavior studies have revealed that (1) the buying center can be considered a communications network (Johnston 1979, Spekman and Stern 1979), and (2) graphs can be utilized to depict the sequence of purchasing tasks and formal and informal relationships among members of the purchasing process (Calder 1977). Network analysis provides a tool for extending the buying center concept and isolating influence patterns embedded in the prescribed and emergent structure of the organization.

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CIGARETTE ADVERTISING REGULATION TODAY:
UNINTENDED CONSEQUENCES AND MISSED OPPORTUNITIES?

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ABSTRACT

Current regulation of cigarette advertising, like past regulation, may unintentionally harm smokers by suppressing health-related information that otherwise would be produced by competitive forces. Advertising on carbon monoxide, new combinations of tar and nicotine, and the problem of smoker "compensation" that now plagues FTC tar and nicotine measurements could provide useful information and tend to remind smokers of health hazards that are not suggested by current advertising.

INTRODUCTION

The cigarette market has provided a natural laboratory for studying the effects of advertising and advertising regulation. While cigarettes themselves have never been regulated (by law they are neither food nor drug nor consumer product), information about cigarettes has been regulated extensively by the Federal Trade Commission (FTC) and by legislation. Some of the landmark regulatory measures of the past probably had unintended adverse consequences. Particularly open to criticism are the FTC's 1955 Cigarette Advertising Guides and 1960 ban on tar and nicotine advertising (both measures are described below), and the 1970 ban on TV and radio advertising.

A natural question is whether cigarette advertising regulation today, which is much different from that of the 1950s and 1960s, also has important unintended consequences. The purpose of this article is to raise the possibility that regulatory distortion continues to be important in the cigarette market, and that "better" competition, primarily through advertising but also in terms of changes in cigarettes themselves, may be possible.

BEFORE 1964

Today's cigarette advertising and advertising regulation can usefully be viewed against the backdrop provided by events of several decades ago. Before 1950, cigarettes were widely considered to be an outstanding example of a product that reached a mass market primarily through advertising. Then in the 1950s came highly publicized reports that cigarettes caused cancer. Two fascinating episodes followed. In the early 1950s, market incentives spontaneously produced "fear advertising," in which smaller firms attempted to exploit smokers' fears in order to induce smokers to switch brands. A notable apparent by-product was a reduction in overall cigarette sales. A few years later, a vigorous "tar derby" arose as a nearly instantaneous response to advice from health experts to lower tar intake and public criticism of filter cigarettes (Calfee 1985, 1986).

"Fear advertising" and the tar derby were both stopped by FTC intervention. The FTC's tools were the 1955 Cigarette Advertising Guides, which prohibited all references to the physical effects of smoking (except pleasure), unless the claims were based on scientific proof, and the 1960 "voluntary" industry-wide ban on tar and nicotine advertising, which prohibited all tar and nicotine claims that were not based on epidemiological evidence of the implied health effects of reduced tar and nicotine. In both cases, the FTC's legal argument was essentially that claims not founded on persuasive scientific evidence should be prohibited.

The main consequences of these interventions were probably not intended by the FTC. The 1955 Guides left cigarette ads devoid of references to possible adverse health effects. This was probably a factor in the industry's rapid recovery in 1955 from the unprecedented sales drops of 1953 and 1954, and is widely thought to be a major reason for the industry's continued vigor today in the face of apparently overwhelming evidence of the deadly effects of smoking. The 1960 ban on tar and nicotine advertising nearly halted the rapid decline in the tar content of cigarettes, a decline that later epidemiological studies would demonstrate was reducing the incidence of lung cancer (Lee and Garfinkel 1981, Lubin, et al. (1984), Participants 1985, Peto 1985). Thus when the FTC prohibited first health claims, and then tar and nicotine claims, on the grounds that evidence of long-term health effects did not exist, the Commission apparently committed a classic regulatory error. It concentrated only on the harm that would ensue if the implied health claims were false, while failing to give due weight to the benefits of the advertising if the claims were true or if the claims tended to improve consumer information and choices.

CIGARETTE ADVERTISING TODAY

The events of the 1950s and 1960s illustrate some of the possibilities inherent in the cigarette market, and demonstrate the ease with which the unintended effects of regulation can counteract, even overwhelm, the intended effects. Much has changed since the early 1960s. The vast political fallout from the 1964 Surgeon General's report on smoking and health (U. S. Public Health Service 1964) included health warnings on cigarette packages (required by legislation in 1965) and an end to advertising that contained testimonials or explicit appeals to young persons (both prohibited by a successful industry "self-regulation" code in 1965 that was clearly motivated by fear of legislation). In 1966, the FTC changed its mind on allowing tar and nicotine advertising, and in 1967, began to produce its own ratings, which the major cigarette companies later pledged (in 1970) to include in all advertising (FTC 1981, p. 4-3). Radio and TV advertising was banned by Congress in 1970, only to be followed by the complaint that the unintended effect of the ban (elimination of anti-smoking messages on TV, which had been provided under the fairness doctrine) outweighed the intended effect of suppressing consumption (Hamilton 1972, Warner 1979, Schneider, Benjamin, and Murphy 1981). Health warnings were extended from labels to advertisements in 1972 through FTC action (FTC 1981) and later by legislation (Comprehensive Smoking Education Act of 1984).

The relationship between health information and cigarette advertising has also changed. In the 1950s major new health information quickly and profoundly changed cigarette advertising, an example being the tar derby of 1957-59. Today, changes in health information do little to change advertising, or even the cigarette market itself. Even as product information continues in a state of turmoil -- new evidence arrives almost monthly attributing yet more health problems to smoking -- the market itself remains peaceful (apart from legislative conflict). Thus for nearly twenty years cigarette advertising has proceeded on a remarkably steady course, characterized by a persistent, and oft criticized, emphasis on the joys of smoking (FTC 1981, American Medical Association, Board of Trustees (1986), along with vigorous competition for lower FTC tar and nicotine ratings. Health claims have been virtually non-existent in recent decades (except to the extent that claims of low tar or nicotine are interpreted as health claims).

¹The views expressed here are the author's and not necessarily those of Federal Trade Commissioners or other members of the FTC staff.

Thus the two dominant aspects of cigarette advertising today are, first, competition on tar and nicotine content, and second, lack of competition in the form of more explicit health-related advertising, including advertising on ingredients other than tar and nicotine. Both these features of modern cigarette advertising merit a close look, and both may reveal unintended effects and missed opportunities. I offer here a limited, selective view.

TAR AND NICOTINE COMPETITION TODAY

Tar and nicotine advertising can be seen as having two effects. One is to inform consumers of tar and nicotine content, thus guiding smokers to reduced-yield cigarettes and providing manufacturers an incentive to produce such cigarettes. A second effect, more subtle, is to remind smokers that cigarettes are dangerous -- else why reduce tar and nicotine at all? I concentrate in this section on the first, more obvious role of providing information on tar and nicotine yield.

The FTC's purpose in obtaining an industry agreement to include FTC tar and nicotine ratings was to make smokers more aware of the health trade-offs and to foster competition in reducing yield (FTC 1966, 1967). That purpose has largely been met, at least with respect to tar and nicotine content. Tar and nicotine information forms a major focus in much cigarette advertising. Sales-weighted tar and nicotine content, by FTC measures, declined by more than one-third between 1970 and 1981 (when the FTC last calculated sales-weighted averages) and has probably declined substantially since then with the advent of lower-tar brands (FTC 1984b, 1985). The health benefits of lower-tar cigarettes have been substantial. Declines in tar in the U.S. and in other countries (which have generally lagged behind the U.S. in this respect) have been associated with substantial declines in cancer rates (Lee and Garfinkel 1981, Lubin, et al. 1984, Participants 1985, Peto 1985). Thus by some measures the FTC program met with great success, although this success was undoubtedly delayed by the FTC ban on tar and nicotine advertising during the early 1960s, and one could argue that the spontaneous tar derby of 1957-59 demonstrated that the FTC tar and nicotine program mainly duplicated natural market forces.

Recent discussion of reduced tar cigarettes, however, has focussed on the growing flaws in the FTC's system. The problem is an apparent disparity between what the FTC smoking machines inhale and what real smokers inhale. The smoking machines have remained essentially unchanged since their inception in 1967, while the technology for reducing cigarette yields has evolved substantially. Much of the recent decline in rated tar and nicotine content is due to the popularity of filters that use holes, channels, or porous coverings to dilute the smoke so as to produce very small amounts of tar and nicotine in the standard measuring devices. Smokers of these low-yield cigarettes have been observed to "compensate," that is, smoke differently so as to ingest more tar and nicotine than the smoking machines do. Compensation takes several forms: inhaling deeper, smoking closer to the butt, puffing more frequently (some brands improve their ratings simply by burning faster, since the FTC machines smoke at a constant rate,) leaving a shorter butt, and (depending on filter type) blocking the holes or channels with the fingers or lips.

FTC Smoking Machines and Barclay Cigarette Advertising

Compensation does not necessarily affect equally rated brands the same way. Thus ratings and compensation can affect competition. A particularly striking example arose with the introduction in 1981 of Barclay cigarettes by Brown and Williamson. Barclay's innovative filter used "channels" along the outside of the filter to help dilute smoke and thus yield very low levels of tar and nicotine. Objections from competitors (Barclay was a remarkably successful new brand) led to an FTC staff investigation. The staff concluded that the Barclay filter in effect

fooled the FTC's testing machines, because human lips would crush the channels or occlude the ends of the channels, whereas the machines did not. The FTC therefore sought to revise its ratings for Barclay, and a legal battle ensued. The Commission eventually obtained an injunction preventing use of the FTC figures in ads for Barclay (FTC v. Brown and Williamson 1983, 1985).

While the Barclay case was under appeal, the Commission solicited public comments on ways to change the FTC's testing method to take into account some of the difficulties posed by newer types of filters (Wall Street Journal 1985, Antitrust and Trade Regulation Reporter 1985.) After the federal appeals court gave the Commission most of what it wanted, Brown and Williamson and the FTC staff agreed on a modification of both the Barclay filter and the claims made for it, although the new tar and nicotine claims still are not derived from measurements on the standard FTC smoking machines. In the meantime, the fate of the smoking machines remains unsettled. The FTC has not yet taken action to modify the machines, and the industry apparently has provided no convincing proposal for modifications. Thus the problem of smoking machines and filters remains unresolved for the moment.

The "Compensation" Problem

The Barclay episode is symptomatic of the larger problem of smoker compensation and its effects on the validity of FTC ratings. A rapidly expanding literature (see survey in U. S. Public Health Service 1984, chapter 6) has yielded mixed results on the nature and extent of compensation. These laboratory findings are undoubtedly sensitive to research design and the type of human subjects used. It is clear, however, that the disparity between FTC measures and actual ingestion of tar, nicotine, and carbon monoxide can be substantial. For example, Kozlowski, et al. (1980) found that hole blocking can increase tar and nicotine yields by 59-293%. Gori and Lynch (1983) found that differences in FTC nicotine ratings of up to seven-fold produced only 30-40% differences in nicotine intake. Benowitz, et al. (1983 and 1985) found almost no relation between FTC measurements and actual ingestion of nicotine for a set of low-yield brands, but did find a substantial reduction in ingestion for "ultra-low" nicotine brands, that, as of this date, command negligible market share. Kozlowski (1981) found that even such a simple matter as puffing faster than the FTC's smoking machines can increase tar and nicotine yield by more than 50%.

As the Barclay episode illustrated, the effects of compensation are not always proportional (that is, two brands with identical ratings may induce different degrees of compensation), so that rankings and relative ratings may be changed. Hoffman, et al. (1983) found different compensation for different types of filters, with especially great compensation (particularly for CO) for filters with longitudinal channels. Wald, et al. (1980) found different effects for ventilated and unventilated filters.

Compensation is usually incomplete, so there may remain a two or three-fold difference in yield between high- and low-yield brands. For example, Wald, et al. (1980), looking only at compensation via inhalation rather than by hole-blocking and other means, estimated that tar intake is reduced by about half the measured reduction, and concluded that smokers of low-yield cigarettes still get less tar and nicotine. Rickert, et al. (1983) concluded that compensation does not materially affect ratings with respect to tar intake. (Also see Stepney 1981 and the review in Participants 1985). Compensation may not be the same for all ingredients. Hoffman, et al. (1983) found that with Barclay-style filters compensation was much greater for carbon monoxide than for tar and nicotine. A recent conference on the future of low-yield cigarettes concluded that, as a rule of thumb, compensation causes the reduction in tar intake to be only about half the reduction indicated by FTC measures, whereas for nicotine

and carbon monoxide, compensation eliminates most of the FTC-measured reduction in yield (Participants 1985, pp. 2, 3). Nonetheless, some researchers have found low-yield brands effective in reducing carbon monoxide intake (Prue, Krapfl, and Martin 1981).

All this has led to considerable debate over whether public policy should continue to encourage sales of low-yield cigarettes. Almost everyone seems to agree that if the choice is between smoking low- or high-yield cigarettes, the choice should be low-yield (Kozlowski 1985, Participants 1985). But the existence of low-yield cigarettes may keep some persons from quitting and may induce others to smoke who otherwise would not try (Silverstein, et al. 1980), and the effect of low-yield cigarettes on heart disease has yet to be demonstrated (Participants 1985, p. 1112; U.S. Public Health Service 1983, pp. 121-122). For these reasons, expert opinion of public policy toward low-yield cigarettes promises to remain unsettled in at least some minds. For several points of view, see Wynder and Hoffman (1975), Gori and Lynch (1978), Marx (1978), Gart and Schneiderman (1979), Wynder (1980a and 1980b), Kozlowski (1982), Lenfant (1983). One thing that is clear, at any rate, is that a consensus in favor of doing away with FTC measurements is not close to coming about (Participants 1985, Kozlowski 1985, Peto 1985).

Competition Over the Benchmark Itself

The problem of FTC ratings could conceivably be alleviated by more comprehensive advertising in which sellers compete over the benchmark itself. Whether this will ever happen, or how, is a matter of speculation. Successful brands that induce compensation by smokers are likely to come under attack from brands that do not induce compensation. An important question is whether the attack would come through the market (for example, by counter-advertising) or through appeals to regulators or the courts. The Barclay episode is a case in point. The FTC case was prompted by complaints from the two largest competitors.

In Europe and other western nations, where there are no FTC measurements, the battle has been joined through a number of means -- appeals to regulators, appeals to the entities that publish tar and nicotine measures, proposed legislation, and private litigation alleging deceptive advertising -- but direct market methods may be rare or non-existent. This suggests that firms are willing to fight over tar and nicotine benchmarks when the stakes are large, but not necessarily with tools afforded by the marketplace.

An alternative form of competition would be the use of other testing laboratories. In the tar derby of the late 1950s, all advertising relied upon recognized third-party tests (generally the results published in Reader's Digest or Consumer Reports). This apparently worked well for that brief period. There is every reason to believe that private testing laboratories would be more flexible than one run by a federal bureaucracy, and competition among laboratories might ensure that useful changes were adopted.

OTHER POSSIBILITIES FOR HEALTH-RELATED ADVERTISING

I noted earlier that advertising of reduced tar and nicotine carries dual messages, suggesting that the advertised brand is safer, but also that cigarettes are inherently unsafe. The two messages would have quite different effects. The first, brand-specific message tends to divert smokers to low-tar brands, while the second, market-wide message tends to discourage smoking in general. An interesting question is how strong the second effect is. The answer is of course unknown, and I do not propose to attempt an answer here. But it seems possible that at present the negative effect on market-wide sales is small. In current tar and nicotine ads, the health messages are never more than suggestions, for the ads never explicitly mention health or specific illnesses.

I consider here the possibility of ingredient claims beyond current tar and nicotine advertising. These possibilities are important because they suggest the substantial changes in cigarette composition and consumer awareness such advertising could bring, and tend to raise with greater force the regulatory issues associated with explicit health claims. I consider first the possible claims themselves, and then discuss briefly the interesting question of how current FTC advertising law might apply to such claims.

New Possibilities for Ingredient Advertising

The problems in tar and nicotine advertising today extend beyond the compensation phenomenon. Measured tar and nicotine yield are highly correlated across brands, a situation that has little basis in either health or the technology of cigarette production. Also, the market ignores other smoke constituents, particularly carbon monoxide, which could be as important as tar and nicotine. With advertising concentrating only on tar and nicotine, generally as a pair, product development has not proceeded independently upon the three dimensions of tar, nicotine and carbon monoxide. With these facts as background, I look here at two possibilities: carbon monoxide advertising, and "decoupled" tar and nicotine advertising.

Carbon monoxide advertising: Carbon monoxide is notable for its absence from cigarette advertising. At one time this would have been unexceptional, for the early landmark government reports on smoking and health did not indict carbon monoxide at all (Royal College 1962, U. S. Public Health Service 1964). But as evidence connecting smoking with heart disease accumulated, attention turned to carbon monoxide as a possible cause. The FTC began measuring carbon monoxide in 1981, but the carbon monoxide numbers are not part of the voluntary agreement to advertise tar and nicotine, and so far as I know, carbon monoxide advertising has never occurred. The lack of explicit carbon monoxide information in advertising could be significant for two distinct reasons. For some kinds of low-tar cigarettes, particularly those for which smoker compensation is significant, carbon monoxide yield may not correlate closely with other ingredients; thus explicit advertising of carbon monoxide yield would aid smokers in changing carbon monoxide intake. In addition, advertising that focusses on an ingredient that clearly does not cause lung cancer would probably tend to focus attention on other illnesses such as heart disease. This has been noted by public health experts (Participants, p. 1113) as part of their larger concern with too narrow a reliance on tar as a measure of risk (U.S. Public Health Service 1981, p. vii).

One reason for the lack of carbon monoxide advertising may be a lack of stimulus. When tar and nicotine advertising hit the market with overwhelming vigor in 1957, it did so under the stimulus of widely publicized expert pronouncements that reduced tar cigarettes would probably be safer. This made it possible for cigarette advertisers to talk about tar levels without having to educate (or scare) the public about the health implications. No such stimulus has occurred in the case of carbon monoxide. Even the new rotational warnings required on labels and in advertising are ambiguous: the carbon monoxide warning simply says, "SURGEON GENERAL'S WARNING: Cigarette Smoke Contains Carbon Monoxide," without stating that carbon monoxide causes any particular disease. Thus the new warning messages may not provide a strong stimulus for competition in carbon monoxide levels.

An adventurous advertiser of a low carbon monoxide cigarette could take on the task of educating the public about the dangers of carbon monoxide. The advertiser would benefit other low carbon monoxide brands, of course, but the advertising could still be highly effective if it tapped the natural fear of a gas widely known to be highly toxic. A problem with such an approach, however, stems from the same circumstances that presumably led to the ambiguous new label warning on carbon monoxide. Apparently there

does not exist conclusive medical proof that the carbon monoxide in cigarette smoke is harmful for the average smoker. Coronary heart disease is numerically the most serious illness associated with smoking and is presumably the main illness that would be connected with carbon monoxide. But recent reviews by the Surgeon General of smoking and heart disease noted a lack of consensus on whether and how carbon monoxide leads to heart disease (U.S. Public Health Service 1981, pp. 10 and 125-126, and U.S. Public Health Service 1983, pp. 51 and 229), as did a more recent survey on the effects of various cigarette ingredients (Participants 1985, p. 1112). The latest FTC staff statement on carbon monoxide noted roughly the same conclusion (FTC 1981, p. 1-31 and 1-34).

Thus a claim that ingesting less carbon monoxide makes a brand safer could be subject to attack by the FTC (or by competitors, invoking the Lanham Act), as lacking substantiation. The sources that note a lack of consensus on the role of carbon monoxide also argue there is no evidence that heart disease is likely to be reduced significantly by smoking currently available low-yield cigarettes -- nor could there be such evidence if in fact smoker compensation offsets most of the measured yield in carbon monoxide (Participants 1985, p. 1112; U.S. Public Health Service 1983, pp. 121-122). How the FTC's advertising substantiation policy would apply to this situation is discussed separately below. Here, I simply note that since promulgation of the 1955 Cigarette Advertising Guides by the FTC, apparently no manufacturer has explicitly advertised that its cigarette is safer for any reason.

The low-tar, medium-nicotine cigarette: A number of experts have suggested that a low-tar, medium-nicotine cigarette might be preferable to anything on the market today (Russell 1976, Jarvis 1981, Stepney 1981, Gerstein and Levison 1982). The theory is that smokers usually smoke in order to gain the effects of nicotine, and nicotine has yet to be shown appreciably harmful to most smokers. Thus if smokers are going to "compensate" in order to adjust nicotine intake, it might make more sense to build a cigarette that decouples tar and nicotine yield so as to reduce tar (which almost certainly causes lung cancer) or perhaps reduce both tar and carbon monoxide, while retaining a "medium" level of nicotine. The higher level of nicotine yield would presumably prevent compensation and thus insure truly low yields of tar and carbon monoxide.

The market has yet to see a product or advertising that seeks to exploit this approach. The situation is much the same as with the lack of carbon monoxide advertising. Smokers would have to be told through advertising why they should switch to the new type of cigarette, and the reasons would be framed in terms of health and, perhaps, compensation. Although advertisers might be able to claim that the evidence indicting nicotine as a health hazard falls short of being conclusive, nicotine remains a prime suspect in heart disease. There is no solid proof that the medium-nicotine, low-tar cigarette is in any sense as safe or safer than the low-nicotine, low-tar cigarette (Gerstein and Levison 1982, p. 29-30). Thus the most useful advertising for these kinds of cigarettes, like advertising for the benefits of lower carbon monoxide, could come under attack as lacking substantiation. (I note in passing that advertising for the medium-nicotine, low-tar cigarette, like carbon monoxide advertising, would also have the desirable effect of calling attention to illnesses other than lung cancer.)

FTC Law and Other Constraints

Suppose a cigarette company were to advertise of its brand that because a smoker would inhale less carbon monoxide, the cigarette is "safer" or presents less risk of heart disease. Such a claim would be subject to the FTC advertising substantiation doctrine, which requires a "reasonable basis" for all product claims (FTC 1983, 1984a; Ford and Calfee 1986.) I am not competent to predict what the FTC would consider to be a reasonable basis for the claim

in question. The Commission's statement on ad substantiation notes, however, that the "reasonable" level of substantiation will be determined by taking into account the harm if the claim turns out to be false, the benefits if it turns out to be true, the costs of more thorough substantiation, and other factors related to costs and benefits. In this case, probably little if any harm is expected from reducing carbon monoxide, potential health gains would be great if the claimed reduction in risk actually occurs, and the costs of further substantiation (long-term epidemiological data) are probably high. Thus it seems clear that the FTC probably would not require conclusive scientific evidence that a cigarette with a lower FTC carbon monoxide rating is certain to bring reduced risk. The present policy seems different from that obtaining in the 1950s, when the Commission's concentration on only the costs of possibly false claims led to the 1955 Guides and the 1960 ban on tar and nicotine advertising.

The nuances of FTC advertising regulation are not the only restraints on more aggressive advertising of the health aspects of smoking. The various voluntary health associations, which wield considerable influence, might look askance at any advertising that could potentially reassure at least some smokers who might otherwise quit. And for very different reasons, the cigarette industry itself may view with distaste a new generation of advertising that would be more likely than current tar and nicotine advertising to suggest to smokers the dangers associated with smoking.

CONCLUSIONS

Cigarette advertising today is far less rambunctious than it once was, particularly in the use of health claims. The health-related advertising that remains, primarily tar and nicotine advertising, has become distorted during the nearly twenty years in which FTC measurement methods have remained unchanged. More competitive advertising, as well as FTC changes, might make tar and nicotine advertising more productive than it is. Regulation may also tend to suppress other claims of great potential benefit. These unobserved forms of advertising, which include claims for carbon monoxide levels and for new combinations of tar and nicotine, as well as advertising that addresses how tar and nicotine are measured, could bring improved cigarettes and better consumer choices, while also drawing attention to health hazards other than lung cancer, such as heart disease.

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A PRELIMINARY INVESTIGATION OF THE INFORMATION CONTENT OF
CIGARETTE ADVERTISING: A LONGITUDINAL ANALYSIS¹

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Abstract

This paper examines whether cigarette advertising has exclusively provided information regarding the pleasurable aspects of smoking or whether it also raised the possibility that cigarette smoking is unhealthy and/or dangerous. This is relevant given the evolution of product liability theory and the commercial free speech controversy. The findings provide empirical support for Calfee's (1985) assertion that prior to the FTC's 1955 cigarette advertising guides, health claims constituted a considerable portion of the information disseminated through cigarette advertising.

Introduction

Conventional wisdom has long recognized that cigarettes may be unhealthy and/or addictive. Cigarettes have historically been referred to as "coffin nails" and were the target of antismoking crusaders in the early part of this century (Calfee 1985). As early as 1604, King James is said to have been disgusted at the fact that tobacco users become "obstinately addicted" to the substance (Garner 1980). It was even suggested in a 1953 Business Week article that the cigarette industry itself, had discouraged smoking by advertising "at the top of their lungs about nicotine, cigarette hangovers, smoker's cough, mildness and kindred subjects." While Calfee (1985) has examined the effect of regulation on health information in cigarette advertising, no one has ever systematically examined the extent to which cigarette advertising has provided information leading to the conclusion that smoking may be unhealthy.

Such an examination of past and current cigarette advertising is interesting given the evolution of product liability theory and the commercial free speech controversy. Moreover, Calfee (1985) has suggested that prior to the Federal Trade Commission's (FTC) 1955 imposition of cigarette advertising guidelines, health related claims constituted a significant portion of information conveyed in cigarette advertising. The purpose of this paper then, is to contribute to our understanding of what types of information, or lack thereof, was/is provided by cigarette companies, and was/is available to smokers, through print advertisements. More specifically, this paper examines whether cigarette print advertising has provided information about the health consequences of smoking. Since the adverse consequences of smoking often take several decades to reveal themselves, cigarette print advertising throughout the last sixty years is examined.

These findings are particularly relevant in the context of current product liability litigation wherein plaintiffs have alleged that they relied on advertisements for information and were induced by them to continue smoking notwithstanding the warnings (Harvard Law Review 1986). In the context of the commercial free speech controversy, which frequently focuses on the right of the consumer to

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receive commercial information (Welkowitz 1986), this study will help identify the types, and relative prominence, of information conveyed. And lastly, these findings will assist in quantifying the degree to which health claims were made prior to the FTC 1955 cigarette advertising guidelines.

The paper is organized as follows. Research objectives and methodology are next discussed and described. This is followed by a presentation of the findings. The final section discusses the implications of this study and presents suggestions for additional research.

Methodology

With the foregoing in mind, the objective of this research was to determine: (1) the extent to which cigarette advertising included information about the health consequences of smoking; (2) the type of health information contained in such claims; and (3) how the extent and type of health information varied over time and by brand.

Given these objectives, content analysis was thought to be the most appropriate methodological approach. Information provided in advertisements from 1926 to 1985 was analyzed. This time period was selected because magazine advertisements for these products were uncommon prior to 1926 and were not yet available for 1986. Data collection proceeded as follows. Five cigarette brands offered for sale during this time period were selected. The original product type, manufacturer, and introduction date for each of the brands chosen was: Camel (unfiltered, R.J. Reynolds, 1913), Chesterfield (unfiltered, Liggett-Meyers, 1912), Old Gold (unfiltered, Lorillard, 1926), Viceroy (filtered, Brown and Williamson, 1936) and Lucky Strike (unfiltered, American Tobacco, 1916). In addition the advertisements associated with a later filter brand (Kent, Lorillard, 1952) were examined.

These brands were chosen on the basis of market share and size of firm. Camel, Lucky Strike, and Chesterfield together commanded over 80% of the market in both 1925 and 1935 (Calfee 1985). By 1950, those three plus Old Gold and Phillip Morris had a combined share of over 80% of the market. Viceroy, therefore, was a less popular brand and was included to contrast the other four. By 1963, the filter brands reduced the combined share of the original big three brands to 21% (Calfee 1985), and thus, Kent was selected to represent these entries. Further, brands offered by both large and small firms were desirable. Camel and Lucky Strike were produced by the two consistently largest firms (R.J. Reynolds and American Tobacco), while the remaining four brands were produced by smaller actors (Calfee 1985).

One print advertisement for each of these brands was sought for each of the sixty years. It was felt that one advertisement per year was sufficient to illustrate how advertising content changed over time. Advertisements were obtained from Time magazine (first published 1923) dated as close as possible to July 1. July 1 was selected in order to avoid seasonal variation and year-end budgetary effects. If an ad for any of the above brands could not be located in Time, an ad was pulled from the corresponding volume of The New Yorker (first published 1925, ceased cigarette advertising in 1964), The Saturday Evening Post (published 1821 to 1969 and 1971 to present), or Life (published 1936 to 1971 and 1969 to present), in that order. Of these publications, only Time is considered to be a "news and opinion magazine", the remaining three are categorized as "general editorial" (Ulrich's International Periodical Directory 1985).

Advertisements could not be located, in the publications chosen, for each brand in every year. Further research indicated that the primary reason for a missing advertisement was the total absence of magazine advertising for a given brand in a given year (Publishers' Information Bureau/Leading National Advertisers). The next most common reason was, according to LNA, the absence of advertising in the publications selected for a given brand in a given year.

Advertisements for Camel were most successfully located with 0.77 of all years represented (n=46, 60 years). The other brands are represented as follows: Kent 0.76 (n=25, 33 years), Lucky Strike 0.73 (n=44, 60 years), Viceroy 0.68 (n=34, 50 years), Chesterfield 0.63 (n=34, 60 years) and Old Gold 0.40 (n=24, 60 years).³ Of the 211 advertisements collected, 70.6 percent came from Time, 8.5 percent from The New Yorker, 8.5 percent from The Saturday Evening Post, and 12.3 percent from Life.

A coding scheme for the information conveyed in the headline, subhead and copy was then developed. A review of the literature,⁴ and an examination of a variety of ads, suggested the following general categories of information related to: health, cigarette construction, taste, exhortation to purchase/slogans, hedonic satisfaction, tar and nicotine content, price/availability, coupons/contests, and celebrity/athlete endorsements. Each claim or statement (hereafter referred to as claims)⁵ was entered only once regardless of the number of times that particular claim was repeated within a single advertisement. For example, if a claim appeared in the headline, the subhead, and the copy, the claim was coded for the headline only. The focus of the study was the number and type of distinct claims or statements, not the amount of repetition within the ads. This is consistent with the approach adopted by Pollay (1985).

Two raters (judges), who were unaware of the purpose of the study, were trained in the use of the coding scheme. Each judge examined and coded the entire set of ads and the inter-rater reliability was found to be 0.81.⁶ Differences in code assignments were then resolved and the resulting consensus served as the final data base.

Results

The results will be presented as follows. First, the most common categories of claims will be described and compared across brands and time periods. This will be followed by an examination of the specific health claims made and an evaluation by brand and by decade.

Most Common Claims. Taste claims (e.g. mildness, flavor, aftertaste) were the most frequently made in the total

³ All four of the unfiltered brands later added a filter. When advertisements for the unfiltered variety could not be located, the filtered variety of the same brand was substituted and noted. The years in which these substitutions began were: Camel 1971, Lucky Strike 1965, Chesterfield 1967, and Old Gold 1955.

⁴ In particular see Doron (1979); Miles (1982); Taylor (1984); Calfee (1985); Pollay (1985); Tye (1985); Warner (1985); and The American Medical Association (1986).

⁵ An exhortation to buy a brand is not strictly an advertising claim, it is a directive. Likewise, encouraging contest participation is not an advertising claim, it is an invitation. However, the majority of the information found in these advertisements could reasonably be described as claims.

⁶ As suggested by Kassarian (1977), the measure of reliability used was the ratio of coding agreements to the total number of coding decisions. Kassarian asserts that researchers can be satisfied with coefficients of reliability above 85 percent.

set (all brands, all years) of advertisements: they constituted 22.3 percent of all claims made. Next in frequency (19.7%) were statements associated with cigarette construction (e.g. filter, quality of tobacco, package). Health claims were the third most frequently made, with 18.2 percent of all claims being health related (e.g. reduced throat irritation, reduced coughs, protection against adverse health effects). Thus, nearly one-fifth of all claims involved health (health claims exclude the Surgeon-General's Warning and tar and/or nicotine figures). Statements relating to pleasure accounted for 10.7 percent. All remaining information fell into categories constituting 33.1 percent of claims made. In the 211 total advertisements, an average of 5.5877 claims were made (s.d. = 2.2857) and ranged from 1 to 12 claims per advertisement.

Since an advertisement was not available for all brands in all years, comparisons of claims by brand and over time were made on the basis of the percent of total claims constituted by a particular category of claims. The time periods used were as follows: 1926-29, 1930-39, 1940-49, 1950-54, 1955-59, 1960-69, 1970-79, and 1980-85. Analysis of claims by decade is convenient and is consistent with the work of advertising historians such as Fox (1984) and Pollay (1985). The decade of the fifties was split in order to more closely examine the effect of the 1955 Federal Trade Commission ban on health claims in cigarette advertising. This allows for a pre- and post-1955 analysis consistent with Calfee (1985). Advertising of tar and nicotine figures by certain brands (Camel, Lucky Strike and Old Gold) was banned by the FTC in 1950-51 (Calfee 1985;1986); tar and nicotine figures associated with brands not effected by earlier FTC actions were banned by the FTC in 1960; and the inclusion of tar and nicotine figures was subsequently mandated in 1970. Thus, changes in policy regarding the inclusion of tar and nicotine figures coincide well with the decade breakdown used.

As is shown in Table 1, from 1926 to 1954 the three most frequently made claims in cigarette advertising were those

TABLE 1
Most Frequently Made Claims
(Category as a Percent of Total Claims Per Period)
for All Six Brands

	26-29	30-39	40-49	50-54	55-59	60-69	70-79	80-85
Taste	21.15% (2)	22.18% (3)	23.21% (1)	16.94% (2)	30.68% (1)	32.52% (1)	19.35% (2)	13.21% (3)
Cig Con	15.38% (4)	22.58% (2)	21.94% (2)	14.75% (3)	29.55% (2)	30.89% (2)	11.61% (4)	
Health	23.08% (1)	24.19% (1)	15.19% (4)	26.78% (1)				
Pleasure		13.31% (4)			12.50% (4)	11.38% (4)		
E B/S	19.23% (3)		17.72% (3)	13.11% (4)	14.77% (3)	17.07% (3)		
TN Figs							32.26% (1)	32.08% (1)
Red TN								12.26% (4)
S Gen W							15.48% (3)	14.15% (2)
Other	21.16%	17.74%	21.94%	28.41%	12.51%	8.14%	21.30%	28.30%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%

(Rankings For The Period Are Given In Parentheses.)

Legend

TN Figs = Tar & Nicotine Figures
Cig Con = Cigarette Construction
S Gen W = Surgeon-General's Warning
E B/S = Exhortation to Buy/Slogan
Red TN = Reduced Tar & Nicotine

related to health, taste, and cigarette construction. Health claims were the most frequently made type of claim in three out of the four periods prior to 1954. A typical health claim made by R.J. Reynolds was "Not one single case of throat irritation due to smoking CAMELS." This was stated in conjunction with the findings "of noted throat specialists after a total of 2,740 weekly examinations of throats of hundreds of men and women who smoked Camels--and only Camels--for 30 days" (Time 1950). Viceroy, a Brown and Williamson product, suggested that..."Filtered cigarette smoke is better for your health" (Time 1951) and Lorillard's Old Gold asked..."Why Risk Sore Throats?" when Old Gold promised "Not A Cough In A Carload" (New Yorker 1929).

From 1955 to 1969, taste claims were most frequently made, followed by cigarette construction, exhortation to buy/slogan, and pleasure. From 1970 to 1985, tar and nicotine figures, taste claims, and the Surgeon-General's warning were most frequently conveyed. During the first five years of the eighties, tar and nicotine figures, the Surgeon General's warning, and claims associated with reduced tar and/or nicotine were most frequently presented. Thus, health related information constituted one of the four most frequently made types of claim/statement in every period studied with the exception of 1955 to 1969. See Table 1 for more detail.

As discussed above, prior to 1955, health claims were an important component of cigarette advertising for five out of the six brands studied. See Table 2. Two of these six

TABLE 2

Most Frequently Made Claims
(Category as a Percent of Total Claims Per Brand)
Prior to 1955

	Camel	Chesterfield	Old Gold	Viceroy	Lucky Strike	Kent
Taste	25.00% (2)	32.21% (1)	14.52% (3)	11.11% (3)	17.61% (3)	
Cig Con	11.27% (4)	14.09% (4)	22.58% (1)	32.10% (1)	29.58% (1)	15.00% (3)
Health	29.41% (1)		22.58% (1)	24.69% (2)	21.13% (2)	35.00% (1)
Pleasure		22.15% (2)	17.74% (2)			10.00% (4)
E B/S	13.24% (3)	16.11% (3)	14.52% (3)		16.90% (4)	10.00% (4)
P / A				9.88% (4)		
Red TN						20.00% (2)
Other	21.07%	15.43%	8.07%	22.22%	14.78%	10.00%
Total	100%	100%	100%	100%	100%	100%

(Rankings Are Given In Parentheses.)

Legend

TN Figs = Tar & Nicotine Figures
Cig Con = Cigarette Construction
P / A = Price/Availability
E B/S = Exhortation to Buy/Slogan
Red TN = Reduced Tar & Nicotine

brands (Old Gold, Lorillard and Lucky Strike, American Tobacco) incorporated health claims in their advertising in the 1920's. Camel, Chesterfield and Viceroy began to utilize such claims in the 1930's. Calfee (1985) has suggested that advertising which included "less unhealthy" claims (suggestions that the advertised brand is less unhealthy than a competitor's) would be a more advantageous strategy for smaller firms and that smaller firms would be likely to engage in such advertising earlier than larger competitors. This study neither

confirms nor refutes this suggestion since health claims were present in the early advertisements sponsored by both American Tobacco and Lorillard, a large and small firm respectively. Because of the small number of ads available in the twenties and thus included in this study, it is impossible to establish which of these companies incorporated these claims first. For Kent, introduced in 1952, such claims represented the central focus of its introductory advertising campaign. Only one brand, Chesterfield, failed to utilize health claims frequently. For all of the remaining brands, health claims comprised either the most or the second most frequently used category.

After 1955, taste and construction claims, together with information associated with tar and nicotine, were most common for five out of the six brands examined. Chesterfield was again exceptional in that tar and nicotine information was not presented by this brand until the inclusion of such information was mandated by the FTC. See Table 3.

TABLE 3

Most Frequently Made Claims
(Category as a Percent of Total Claims Per Brand)
1955 and after

	Camel	Chesterfield	Old Gold	Viceroy	Lucky Strike	Kent
Taste	18.87% (2)	29.63% (1)	37.50% (1)	26.53% (1)	24.66% (1)	21.05% (2)
Cig Con		29.63% (1)	37.50% (1)	19.39% (3)	23.29% (2)	18.05% (3)
Pleasure		24.07% (3)				
E B/S	21.70% (1)	5.56% (4)			16.44% (3)	
TN Figs	16.98% (3)			22.45% (2)	16.44% (3)	22.56% (1)
Red TN	10.38% (4)		25.00% (3)			
S Gen W				11.22% (4)		11.28% (4)
Other	32.06%	11.10%	0.00%	20.41%	19.18%	27.07%
Total	100%	100%	100%	100%	100%	100%

(Rankings Are Given In Parentheses.)

Legend

TN Figs = Tar & Nicotine Figures
Cig Con = Cigarette Construction
S Gen W = Surgeon-General's Warning
E B/S = Exhortation to Buy/Slogan
Red TN = Reduced Tar & Nicotine

Health Claims. Of the health claims utilized in the various brand advertisements prior to 1955, those associated with throat irritation, coughs, the irritating properties of cigarettes, and protection from adverse side effects were most common. In the forties and early fifties, it became a common practice to cite "scientific" or "medical" research "substantiating" these types of claims. In the early fifties the notion of health risk reduction was not an uncommon one. It was the fourth most frequently used health claim in the first years of that decade. See Table 4.

Lorillard, makers of Kent, incorporated many of these assertions in a 1953 advertisement: "Here's how you can get the protection you need against nicotine and tars--and the smoking pleasure you want...if you're a sensitive smoker-- and published medical reports show that 1 out of every 3 smokers is unusually sensitive to the tars and nicotine in tobacco--you can now enjoy real health

TABLE 4

Four Most Frequently Made Health Claims
(Category as a Percent of Total Health Claims Per Period)
For All Six Brands

	26-29	30-39	40-49	50-54
Throat Irritation	16.67% (1)	21.67% (1)	27.78% (1)	22.45% (2)
Protection	16.67% (1)	11.67% (2)	8.33% (4)	12.24% (3)
Coughs	16.67% (1)	10.00% (3)		
Irritation	8.33% (4)		11.11% (4)	
Risk Reduction				10.20% (4)
Citation of Scientific Findings			27.78% (2)	26.53% (1)
Relaxing		10.00% (4)		
Other	41.66%	46.66%	25.00%	28.58%

TOTAL 100% 100% 100% 100%
(Rankings For The Period Are Given In Parentheses.)

protection with every cigarette you smoke...If smoking dulls your sense of taste, gives you a 'raw' throat or 'bunched-up' nerves, chances are you're sensitive to nicotine and tars. So, for your own health, as well as pleasure, you should try KENT" (Time 1953).

An examination of Table 5 suggests that, with few exceptions, there is little to distinguish the various brands in terms of the health claims frequently used.

TABLE 5

Most Frequently Made Health Claims
(Category as a Percent of Total Health Claims Per Brand)
Prior to 1955

	Camel	Chesterfield	Old Gold	Viceroy	Lucky Strike	Kent
Throat Irritation	21.67% (1)		25.00% (1)	35.00% (2)	23.33% (2)	14.29% (2)
Protection			17.86% (2)		26.67% (1)	28.57% (1)
Coughs					16.67% (3)	
Irritation		25.00% (1)	17.86% (2)		10.00% (4)	14.29% (2)
Risk Reduction		16.67% (3)		15.00% (3)		14.29% (2)
Citation of Scientific Findings	21.67% (1)	25.00% (1)	17.86% (2)	10.00% (4)		
Relaxing	11.67% (3)	8.33% (4)				
Effects on Organs Other Than Throat				40.00% (1)		
Stimulant	8.33% (4)					
Endorsement by Medical Personnel	8.33% (4)					
Other	28.33%	24.99%	21.42%	0.00%	23.33%	28.56%

Total 100% 100% 100% 100% 100% 100%
(Rankings are given in parentheses.)

Five out of six brands referred to throat irritation; risk reduction or protection was a frequent theme with five of the six; four out of six referred to "scientific" findings. Camel was unique, however, in that it presented brand endorsements by medical personnel.

The actual placement and/or prominence of health claims within the advertisements was also of interest. Of the total health claims made, 23% were presented in the headline, 31% were presented in subheads, and 46% were presented in the copy. Prior to 1955, brands did exhibit differences in the placement and/or prominence of health claims within these ads. Chesterfield and Kent placed the majority of health related claims in the copy, while the four remaining brands (Camel, Old Gold, Viceroy and Lucky Strike) accorded the majority of such claims the prominence associated with headlines and subheads. See Table 6.

TABLE 6

Placement of Health Claims within Advertisements
(Location as a Percent of Total Health Claims Made by Each Brand) Prior to 1955

	Camel	Chesterfield	Old Gold	Viceroy	Lucky Strike	Kent
Headline	18.33%	8.33%	35.72%	25.00%	23.33%	28.57%
Subhead	33.33%	16.66%	25.00%	30.00%	53.33%	0.00%
Copy	48.33%	75.00%	39.20%	45.00%	23.33%	71.43%

After 1955, health related claims were very seldom made (6.5% of all health claims made) and when they were, over 70% were presented in the copy. The Surgeon-General's warning and tar/nicotine figures were presented, almost without exception, in copy. Claims associated with a reduction in tar and/or nicotine however, were most often presented in the headline or subhead.

Discussion

While this study is not one of consumer perception or information processing, it does identify the dominant advertising themes associated with several cigarette brands and examines them over time. It has been demonstrated that until 1954, health claims were a consistent and important consideration in the advertisement of the brands analyzed here. Moreover, in the years following 1970, tar and nicotine figures, the Surgeon-General's warning, and claims regarding reduced tar and/or nicotine were prevalent. Only in the period from 1955 to 1969 was there a paucity of commercial information relating to health.

These findings provide considerable empirical support for Calfee's (1985) assertion that prior to the imposition of the FTC's 1955 cigarette advertising guidelines, cigarette manufacturers voluntarily addressed the issue of cigarettes and health. The prominence accorded to health related claims and the constancy with which these claims appeared leaves little doubt that such claims were a major component of the cigarette advertising strategy adopted by the majority of brands examined here.

Consideration of consumer interpretation of the health related information found in these ads is beyond the scope of this study. However, Calfee (1985) has suggested that brands claiming to be less unhealthy draw attention to the harmful aspects of smoking. Consistent with this view, the present study found that until 1955, ads which incorporated health claims typically emphasized the

harmful effects of the product class in an effort to make other brands appear more harmful by comparison. It is Calfee's (1985) conclusion that in the presence of such advertising, it was probably impossible for any smoker, or potential smoker, to ignore or forget that cigarettes lead to throat irritation, smoker's cough, and other symptoms frequently enumerated in the cigarette advertising of the period.

It is the period 1955 to 1969 wherein health related information in cigarette advertising was lacking. In part, this paucity of health related information may be a function of the brands examined herein. Calfee (1985) found that, in general, tar and nicotine claims were frequently made in the period 1957 to 1960. This was not the case in this study. However, it must be pointed out that three out of the six brands examined herein were subject to earlier FTC bans on tar and nicotine figures, and thus it is not surprising that such assertions comprise a very small percent of total claims made from 1955 to 1959 (less than 1%). Tar and nicotine figures were completely absent after 1960, when the FTC uniformly prohibited their use in cigarette advertising. Moreover, as a result of the 1955 FTC ban, health claims were very rarely made (less than 2% of total claims) from 1955-69.

In 1970, the cigarette industry agreed to use Federal Trade Commission approved figures for tar and nicotine in all advertisements. Claims associated with reduced tar and/or nicotine began to appear in the seventies as well. The first health warning to appear in cigarette advertisements, "Warning--the Surgeon General Has Determined that Cigarette Smoking is Dangerous to Your Health", did so in 1972. With the uniform inclusion of health warnings and tar and nicotine figures it is not surprising that these statements are among the four most frequently made in advertisements after 1970.

Implications for Future Research. This study suggests that further research is warranted in order to fully appreciate the types, and relative amounts, of information contained in cigarette advertising over time. In addition to expanding (including more brands) and improving (including additional print media) the existing longitudinal data base, it has been suggested that a "cross-sectional" examination of cigarette advertising be undertaken (Calfee 1986). Using a methodology similar to that developed by Pollay (1985), it is possible to survey cigarette advertising associated with the product class in selected periods. Such an examination would permit the recognition of behavior idiosyncratic to the brands examined longitudinally and permit an appreciation for the types, and relative amounts, of information generally available to smokers regardless of brand.

If, as has been alleged, plaintiffs in product liability litigation relied on cigarette advertising when making decisions to begin or continue smoking, then an appreciation for when this decision was made seems prudent. If these findings are generalizable, or if plaintiffs smoked the brands examined herein, a case could be made that cigarette advertising did, or did not, provide information relevant to health depending upon when the smoking decision was made. This of course is only the most rudimentary information issue, since how consumers evaluate such information weights heavily on its usefulness. Calfee's (1985) work suggests that an empirical investigation of how consumers process "less harmful" claims is warranted. Do such claims, as he suggests, inform users that consumption of the product class is harmful and therefore provide information pertinent to the assessment of risk? It is also important to examine longitudinally the number, and location, of articles appearing in the popular press which discuss the effects of cigarette smoking on health. This seems particularly relevant for the period 1955-69 in which commercial presentation of health related information was virtually prohibited.

This study has interesting implications for the commercial free speech arguments concerned with consumers' right to commercial information. This study demonstrates that for these six brands in the years 1980-85, tar and nicotine figures, claims regarding reduced tar and/or nicotine, and the Surgeon-General's warning constitute three out of the four most frequently made claims or 58.49% of all claims made. One might argue therefore, that the information content in recent cigarette ads is considerable and that the public would suffer a loss of health related information as a result of a ban on remaining cigarette advertising. Pertinent to such an argument, as well as to those individuals seeking recovery from the cigarette industry, is the issue of consumer evaluation of the health warnings and the tar and nicotine figures incorporated in every advertisement in the recent past. Are such warnings in fact vitiated by surrounding ad copy and visuals? Can consumers make use of tar and nicotine figures in such a way as to evaluate their consumption of both? Clearly, additional research is warranted.

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MARKET FORCES, INFORMATION AND REDUCED FLAMMABILITY CIGARETTES

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Abstract

Fires started by cigarettes are a significant problem that tends to be concentrated in certain socio-economic groups. The federal government may require that cigarettes be changed to reduce their tendency to start fires. The net effect would depend partly on how the market would adjust. Among the possibilities are increased tar and nicotine yield, decreased care in preventing fires, and possibly, decreased consumption of cigarettes.

Introduction

Government intervention often requires that products possess certain attributes (such as seatbelts) or meet certain standards (such as with bumper standards). When intervention is concerned with only one or a few of the characteristics of the product, other product attributes remain free to be determined by the market. The manner in which manufacturers and consumers adjust to the new requirements may dominate the total changes from the intervention and result in consequences not intended by the regulators. Government planning for intervention should therefore include an assessment of how markets are likely to adjust to the intervention.

In this paper we describe an interesting case of a possible intervention that is still in the early planning stages. Our purpose is to illustrate how market factors, especially information, could play a role in the outcome of the intervention. The potential intervention is to require reduced flammability cigarettes, i.e., cigarettes that are less likely to cause fires. This possible intervention arose because fire-starting is a major but easily overlooked outcome of smoking. Recent estimates are that smoking caused fires result in approximately 1,500 deaths each year (FEMA 1984, p. A18.) The federal government is now investigating the possibility that mandating new standards for cigarettes will significantly reduce this cost.²

The cigarette market is particularly appropriate for analyzing the effects of public policy because information in this market has been highly regulated, while the product itself has remained virtually unregulated (cigarettes and other tobacco products are exempt from FDA regulation.) The cigarette market is also unusually well documented, and experience has shown that this market is capable of adjusting rapidly when consumers are exposed to new and important information about smoking -- or at least the market tends to react quickly when the flow of information is not impeded by government (Calfee 1985, 1986). Moreover, some of the specific attributes of cigarettes, especially health-related ingredients such as tar, nicotine and carbon monoxide, could be affected by changes to reduce fires.

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²Cigarette Safety Act of 1984 (Pub. L. 98-567, 98 Stat. 2925, Oct. 30, 1984.)

Cigarettes and Fires

A natural question is whether the potential effects of reduced flammability cigarettes will vary considerably among socio-economic groups. We begin by estimating the distributions by age, race and sex of those who smoke cigarettes and of those who die in fires started by cigarettes. This allows us to determine whether fires are being started disproportionately by a few types of smokers.³

The most thorough analysis of the demographic characteristics of those who die in fires started by cigarettes is contained in a United States Fire Administration report (Hall and Helzer 1983.) That report used data for 1978-1979 for six states with high fire rates, and six with low rates, and calculated the death rate per million for population groups jointly categorized by age, race and sex.⁴ We used population data to convert these rates into estimates of the actual number of deaths. The separate estimates for the two groups of states were then aggregated by calculating a weighted average based on the total population in the high- and low-fire rate states; this was necessary because the high-fire rate states had twice the relative death rates but only half the population of the low-fire rate states.

Estimating the distribution of smokers was more straightforward since the National Center for Health Statistics (NCHS) supplies such data for smokers aged twenty and above by age, race and sex. The only complicating factor was the fact that the incidence of teenage smoking is not estimated in the NCHS data and had to be estimated from other data sources.⁵

Table 1 shows the distribution of deaths from fires caused by smoking, the distribution of smokers by age, race and sex, and the ratio of smokers to deaths. The marginal percentages show that white males account for slightly over one-half (i.e., 53.7 percent) of all deaths from smoking fires and that white females represent almost 30 percent of the victims. Less than eight percent of the victims are sixteen years or younger (and although not shown here, only three percent are less than five years old). The data indicate quite clearly that most victims of cigarette caused fires are adults, and in fact, 63 percent are 45 years or older.

³Complete details concerning the methodology used to estimate the distribution of fire-starters by age, race and sex are contained in Ford, Brown, and Calfee (1986).

⁴Hall and Helzer warn that the age, sex and race crosstabulations should be treated with caution since the incidence of death calculations were based on small numbers of cases. This note of caution is worth bearing in mind, since the calculations we perform rely on this data. In our defense, we aggregate the data from the high- and low-fire rate states by calculating weighted averages based on 1980 census population count of each state. Thus, the small sample size problem occurring in some cells is diminished somewhat.

⁵For purposes of this report (and as is explained in more detail in Ford, Brown, and Calfee (1986), we assumed that the participation rates of 17-19 year-old smokers were three percent less than comparable percentages for 20-24 year-olds. While admittedly arbitrary, this approach results in estimates that are consistent with the smoking patterns for even younger smokers and with the patterns observed for white-males, black-males, white-females and black-females.

TABLE 1

RELATIVE CHANCES OF SMOKERS DYING IN SMOKING CAUSED FIRES*

Percent Distribution of Deaths from Smoking Caused Fires

Age	wh. male	bl. male	wh. fem.	bl. fem.	Totals
< 16	2.3%	1.2	3.0	0.9	7.5
17-24	5.6	0.4	2.0	0.3	8.3
25-44	12.4	3.4	3.9	1.3	21.0
45-64	18.7	3.6	13.4	0.9	36.6
> 64	14.6	2.9	7.2	1.8	26.5
Totals	53.7	11.7	29.5	5.1	100.0

Percent Distribution Of Smokers

Age	wh. male	bl. male	wh. fem.	bl. fem.	Totals
17-24	7.6%	1.0	8.2	1.1	18.0
25-44	22.0	3.1	18.9	3.2	47.2
45-64	11.7	1.7	11.6	1.6	26.6
>64	3.6	0.5	3.7	0.4	8.2
Totals	45.0	6.3	42.4	6.3	100.0

Ratio Of Deaths To Smokers

Age	wh. male	bl. male	wh. fem.	bl. fem.	Totals
17-24	1.11	0.74	0.36	0.39	0.71
25-44	0.56	1.11	0.21	0.42	0.45
45-64	1.60	2.13	1.15	0.58	1.38
>64	4.00	6.45	1.95	4.82	3.24
Totals	1.19	1.85	0.70	0.82	1.00

*Cell entries may not sum to column and row totals due to rounding.

The lower section of Table 1 shows, for each category, how the ratio of deaths to smokers compares to the ratio for the average category. An entry greater than one indicates a category of smokers with a greater than average chance of dying in a smoking caused fire, while a ratio of less than one indicates the opposite. We see disproportionately high entries for smokers 45 years and older; this age group accounts for 35 percent of the smokers and 63 percent of the deaths from smoking caused fires. Black males, black females and white males over 64 also seem particularly likely to benefit from a reduction in ignition propensity, since these three groups represent approximately four percent of the smokers but account for nineteen percent of the victims of smoking caused fires. In contrast are the smokers under age 45, especially those between 25 and 44. They are the heaviest smokers (e.g., approximately 30 percent of this group smokes 25 or more cigarettes per day; NCHS 1986b), but have the lowest death to smoking ratio (.45). Thus they will benefit the least (at present) from reduced flammability cigarettes.

Implementing Reduced Flammability Cigarettes

If the government is to require reduced flammability cigarettes, there are quite different methods for doing so. We concentrate on the interactions between the manner in which changes are implemented and the incentives of producers. It is clear that the more regulation is in accord with market incentives, the more likely the regulations will be followed. Less obvious is the fact that some kinds of regulation are more compatible with incentives than others, and that taking this into account can improve the degree to which regulatory goals are achieved (Rubin and Cohen 1985.)

In the present context, there would be a choice between two approaches. One is to require that cigarettes be made a certain way (paper thickness, tobacco weight, and so on.) This may be referred to as a "design" or "input" standard. The second approach is to require cigarettes to

perform in a certain manner (for example, extinguish within forty seconds of being placed on a standard textile surface.) Such a requirement may be called a "performance" standard.

Performance standards offer considerable advantages. Chief among these are that this method more thoroughly harnesses competitive market forces in support of the purposes of introducing the new cigarettes. Firms would be free to achieve the same effects using new methods that could reduce costs, improve the trade-offs between flammability and other features such as tar content, or even improve upon flammability itself. We shall see below that these trade-offs may be quite different for different varieties of reduced flammability cigarettes. Thus performance standards would tend to minimize adverse effects while achieving regulatory goals.

A disadvantage of the performance standard approach is the obverse of its main advantage. The market may eventually compete so exclusively on the exact attributes of the performance standards that the results could be perverse. For example, product development on reduced flammability could concentrate on techniques that work well with the particular textiles used in tests but work poorly with other surfaces. The experience with the Federal Trade Commission's tar and nicotine measurement service has shown that this could happen, although the adverse effects may be slow to emerge (Calfee 1985 and 1987.) If new cigarettes are required and performance standards are used, the problem of competing for the favors of the testing machines should be kept in mind.

Effects of Reduced Flammability Cigarettes
On Consumer Behavior

The availability of reduced flammability cigarettes in the market will alter consumer behavior in two basic respects: precautions against starting fires, and how cigarettes are smoked. Fire precautions depend mainly on what consumers know of the changes in flammability, whereas changes in smoking behavior depend upon the precise ways in which the new cigarettes differ in taste, smoking characteristics, tar and nicotine content, and other traits.

Potential Effects on Precautions Against Fires.

Smokers are presumably aware that fires can be started by careless smoking, especially smoking in bed. Thus we may think of smokers as choosing a level of precaution by balancing the risks of fire against inconvenience and other costs of prevention. The availability of reduced flammability cigarettes will alter the trade-off between inconvenience and fire danger. We would expect a lower level of precautions against fires: more smoking in bed, for example. Similarly, holding all else constant, safer cigarettes should result in somewhat more smoking, since presumably some people refrain from smoking at all in certain situations where fire danger is high, such as when about to fall asleep in an easy chair.

The magnitude of these effects is unknown. A few points are clear, however. The degree to which smokers change precautions in response to changed cigarettes will depend on what they know of the new cigarettes. If reduced flammability cigarettes are mandated, but smokers are uninformed of the new properties, no adjustments would take place until knowledge of reduced flammability becomes disseminated (as it eventually will, of course.) This almost sounds like a good thing, but as we shall see in a moment, smokers of reduced flammability cigarettes may be tempted to ingest substantially more tar and nicotine, and unless they are aware of the advantages of the new cigarettes, they may not make the best adjustments from an overall health standpoint.

Adjustments to reduced flammability cigarettes may vary substantially according to the kinds of people involved. Socio-economic groups that frequently encounter fires started by cigarettes face different trade-offs from those faced by other groups. There is nothing inherently wrong

in this, of course. Trading off life-style and safety is a necessary part of life, such as when one decides to go to work on a day when roads are icy. The point here is simply that when one takes into account the fact that the new cigarettes are less likely to cause fires in any given situation, one also has to remember that consumer adjustments will tend to off-set this effect. Presumably, the net effect is still to reduce fire incidence, although it is hard to demonstrate this with certainty.

Potential Effects on Smoking Behavior.

Reduced flammability cigarettes may be smoked differently. Whether this happens, and how, depends on exactly how the new cigarettes differ from the old ones. Policymakers are considering two types of reduced flammability cigarettes: "self-extinguishing" and "reduced ignition propensity." Self-extinguishing cigarettes will go out if not puffed within a certain period, so as to reduce free burning to a period less than is required to start a fire under most conditions. "Reduced ignition propensity" cigarettes, on the other hand, will have a lower propensity to start a fire when the cigarette is burning. The two kinds have somewhat different implications for consumer behavior and market changes.

Self-Extinguishing Cigarettes. The effect of self-extinguishing cigarettes on smoker behavior depends primarily on four factors: price, taste, smoking characteristics (especially, the time allowed between puffs) and changes in the ingestion of health-related ingredients such as tar, nicotine and carbon monoxide. We deal with price changes elsewhere. We have reason to believe that taste will not be appreciably worsened in these cigarettes, perhaps because of the addition of new flavor enhancers. Two important aspects of self-extinguishing cigarettes remain to be considered: smoking characteristics and health-related ingredients. These are interrelated, because the manner in which smokers change smoking habits to counteract the tendency to self-extinguish may affect how much tar, nicotine and carbon monoxide are ingested.

The data on puff frequency, duration and volume of which we are aware indicate that smokers puff approximately every 40 to 60 seconds, that there is wide variation within and across smokers, that the average puff duration is between two and three seconds and that smokers take between nine and twelve puffs on average per cigarette. (Rawbone, Murphy, Tate and Kane 1978, p. 187 and 190; Creighton and Lewis 1978, p. 292; Guillerm and Radziszewski 1978, p. 365) (One study found that mean duration between puffs ranged from 23 to 115 seconds for different smokers (Guillerm and Radziszewski 1978, p. 365)). If new cigarettes self-extinguish within, say, 60 seconds; many smokers will have to puff more frequently or relight occasionally.

Smokers often increase puff frequency to compensate for reduced tar and nicotine, and thus it seems likely they will do the same in order to avoid the annoyance of a cigarette that self-extinguishes. If so, more smoke would go into the lungs of the smoker, and less into the ambient environment. Thus self-extinguishing cigarettes could have the unintended consequence of dramatically increasing tar and nicotine consumption. For example, Kozlowski (1981) estimated that increasing puff frequency increases tar delivery by 58 percent or more.⁶

The amount of tar consumed by smokers could also increase because of changes in cigarette construction or ingredients. We understand that in order to reduce burn rates, self-extinguishing cigarettes are likely to have reduced

paper porosity and/or increased tobacco density. Less porous paper will cause less dilution of the smoke with air, and will therefore increase the extent to which smokers inhale undiluted smoke. The effect could be substantial. Kozlowski estimates that in an ultra low tar cigarette (i.e., 1 mg of tar), as designed, as much as 80 percent of the smoke in each puff is diluting air (Kozlowski, n.d., p. 8). In addition, denser cigarettes exhibit a slower burn rate and this, too, may result in increased tar levels.

To some extent, changes in cigarette characteristics will be reflected in FTC tar and nicotine ratings. But the effects of changes in smoking behavior such as puff frequency and/or duration are unlikely to be captured by the FTC rating system. The FTC's system has not been altered in the twenty years since its inception, despite the well-documented existence of compensatory smoking behavior that sometimes makes FTC ratings inaccurate, and there seems little reason to expect changes soon (Calfee 1987). These problems with the FTC system could be compounded by reduced flammability cigarettes.

Mandated self-extinguishing cigarettes could even render ultra-low tar cigarettes (those yielding roughly 1 to 5 mg of tar) obsolete. These cigarettes use extremely porous paper (and filters), and contain "expanded" tobacco that is puffed so that it is less dense. Requiring that the tobacco in cigarettes be denser and the wrapping paper less porous may therefore remove the least harmful type of cigarette from the market.

Reduced Ignition Propensity Cigarettes. Reduced ignition propensity cigarettes will probably be thinner, faster burning, longer, covered with thicker and more porous paper, and made of expanded tobacco. The new cigarettes may also be coated with a neutral tasting silica gel designed to reduce ignition propensity, and if so, this may curtail the need for the other modifications (Ruegg, Weber and Lippiatt 1986). There seems little reason to expect that smokers will be required to substantially modify puff frequency or other aspects of their smoking behavior. Therefore, the only factor of concern (other than increased costs which are discussed below) involves changes in cigarette construction and/or ingredients, especially the increased use of expanded tobacco.

Expanded tobacco is used in a large proportion of cigarettes manufactured today, including most low tar brands which account for well over fifty percent of the total cigarette market (Maxwell Report 1981). Increasing its use is likely to decrease average tar and nicotine content -- just the opposite effect from what is expected from self-extinguishing cigarettes. The effect on taste will presumably be about the same as would be associated with the reduction in tar, offset by enhanced use of flavorings. We understand that taste is also influenced by the amount of paper being burned relative to the amount of tobacco. If flavorings can be used to mask the paper taste, which apparently is possible, then cigarette taste will be relatively unaffected (Lago 1986). Cost may go down, because less tobacco is required.

The choice between self-extinguishing and reduced ignition cigarettes is an important example of the potential advantages of performance standards over design standards. If cigarettes met whatever reduced ignition standards were mandated, the market could decide whether reduced ignition propensity or self-extinguishing cigarettes would dominate or whether each would find a substantial market segment. Further, manufacturers would be free to bundle certain attributes that consumers may desire (ultra-low tar and reduced flammability, for example) in the same product as long as the product met the flammability standards.

⁶Altering puff frequency is one of a number of ways in which smokers "compensate" for changes in cigarette content and construction. The literature on compensation is extensive and somewhat mixed in its assessment of overall effects on what actually reaches smokers' lungs. Some of this research is summarized in Calfee (1985) at n. 119.

Other Potential Market Effects

Consumption of Cigarettes

Overall consumption of cigarettes will be affected by several factors that tend to off-set one another. One is price. Reduced flammability cigarettes will probably cost more, and if so, this will tend to reduce consumption. The price change will almost certainly be small; actual construction of cigarettes accounts for only a small part of the retail price. We assume that the maximum price increase will be a few cents per pack, which is about a two or three percent increase. A number of studies have estimated the price elasticity of demand for cigarettes. These suggest an overall elasticity of, very roughly, one-half for adults, with a substantially higher elasticity for youths. Moreover, the changes in demand tend to derive substantially from the few smokers who quit altogether, rather than from all smokers reducing consumption equally (Porter 1986, Ippolito and Ippolito 1984, Lewit and Coate 1982). Thus a two percent price increase, for example, would cause roughly one percent decrease in overall consumption, with a larger decrease among youths, and might cause a significant number of persons to quit smoking or refrain from taking it up.

Consumption will also be affected by several factors that have already been mentioned. These include the fact that the cigarettes will be safer to smoke in bed (thus increasing consumption), taste worse (decreasing consumption), have less desirable smoking characteristics (decreasing consumption) and may change in rated tar and nicotine (decreasing or increasing consumption). The net effect of these factors, along with price, seems likely to be negative, but the magnitude is impossible to predict. We speculate, however, that if either taste or smoking characteristics change substantially, this could dominate other factors.

Fires

The net effect of reduced flammability cigarettes on fires is a combination of partially off-setting forces: fewer precautions against fires, a probable net decrease in consumption, and, of course, a substantially decreased likelihood that a burning cigar will cause a fire. It seems reasonable to assume that the overall effect will be to decrease the incidence of fires started by smoking. Whatever happens, it is clear from demographic data that the effects will be concentrated on certain socio-economic groups, those described earlier as exhibiting a large ratio of smoking caused fires to magnitude of smoking.

Health Effects of Smoking

The net effect of reduced flammability cigarettes on the health effects of smoking is, again, a matter off-setting forces. Overall consumption may be down slightly, but cigarettes may yield more tar, nicotine and other dangerous ingredients. Clearly the outcome depends on what kind of reduced flammability cigarettes are introduced. We noted earlier that self-extinguishing cigarettes are almost incompatible with ultra-low tar cigarettes. Epidemiological data suggest, moreover, that a substantial increase in tar yield would have a major effect on lung cancer incidence (see the survey in Participants 1985.)

The Case for Voluntary Standards

Reduced flammability cigarettes will probably become a serious topic for intervention only if they show promise of yielding substantial net benefits. The government could then face a choice between requiring changed cigarettes or simply encouraging these presumably superior products to find their way into the market through more or less natural means. We refer to the latter option as "voluntary standards." The decision between mandated and voluntary standards will depend partly on factors beyond the scope of this study (for example, the extent to which smokers do not bear the full costs of the fires they start).

We think it useful, however, to point out that the "voluntary" approach merits serious consideration. This approach would have some strong advantages. To a large extent, these advantages follow from perhaps the greatest disadvantage of changing the market by means of regulation: if reduced flammability cigarettes were required, it would be nearly impossible for market (or other) processes to reveal consumer valuation of the changes. In an unregulated environment, on the other hand, competing cigarettes would offer a variety of levels of reduced flammability, and consumers would better be able to trade this off against tar and nicotine yield (if there were such a trade-off). This opportunity for choice could be important in view of the strong differences in socio-economic groups in their vulnerability to smoking-induced fires. The information required for such choices would probably be available through advertising. Finally, "voluntary" standards would be less subject to manipulation by vested interests, which often acquire so strong a stake in required product attributes that requirements can be difficult to dislodge even when improvements are possible.

This is not to say that all considerations are on the side of voluntary methods. The free market often works slowly and imperfectly, at least from the standpoint of regulators and legislators. Moreover, requiring that all cigarettes be changed could, as we noted earlier, partly obviate the possibility that smokers will compensate for safer cigarettes by being more careless.

Conclusions

Requiring reduced flammability cigarettes could have unintended consequences, mainly because of how market participants would adjust to the new cigarettes. Depending upon the kinds of cigarettes required, levels of tar, nicotine and other health-related ingredients could increase substantially, and do so in a manner not fully detected by FTC ratings. Smokers will probably be less careful about causing fires. Implementing reduced flammability cigars by means of performance standards instead of design standards could minimize these adverse effects. Whatever happens, the effects will tend to be concentrated in certain socio-economic groups in which fires caused by smoking occur with much greater than average frequency.

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DO MOTHERS AND CHILDREN SHARE CEREAL AND
BEVERAGE PREFERENCES AND EVALUATIVE CRITERIA?

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Abstract

This paper investigates the overlap between mothers and children's brand preferences for 14 cereals and 14 beverages. Multidimensional scaling techniques were used to derive solutions from a paired comparison task of collecting preference judgments. Dimensional weights of both groups were subjected to simple regression analysis. There was very little overlap in the evaluative criteria used by both groups in making preference judgments about cereals and beverages.

Introduction

Relatively little is known about how parents, specifically mothers, influence their children's brand preference formation. Literature provides support for the notion that mothers are the dominant parental influences on the development of children's socialization (Zigler and Child 1969). Within the consumer socialization literature, however, three processes have been identified by which mothers would influence children: (1) children may observe and imitate parental behaviors, (2) parent-child interaction occurring in consumption situations may affect learning, and (3) children may engage in independent consumer behaviors, with some degree of parental guidance (Ward, Wackman, and Wartella 1977a, p. 113). Of these three learning processes, this discussion will primarily focus on the second because it is most likely (other than role modeling) to be involved in mothers teaching their children about brand attributes which, in turn, may be the basis for forming brand preferences. The other two processes involve less verbal interaction between mother and child, and therefore, decrease the likelihood of mothers teaching their children about specific brand attributes.

The interaction between mother and child can be initiated by either component of the dyad. The mother may begin the interaction by discussing an advertisement viewed by both, or the child may initiate the interaction by requesting a specific brand to be purchased, the request perhaps being initiated by exposure to an advertisement. Thus, learning about brands is likely to not only flow from mother to child but also from child to mother.

Parent-Child Interactions

One aspect of the mother-child interaction dyad is the degree to which mothers yield to purchase requests from their children. Evidence suggests that mothers do yield to their child's request for cereals at least 67 percent of the time (Atkin 1975, 1978). Ward and Wackman (1972, 1973) and then Ward, Wackman, and Wartella (1977a, 1977b) studied this phenomenon and found that children across age categories asked for products by brand name at least 60 percent of the time. Further, the percent of time mothers yielded was related to children's cognitive stage. Generally, mothers yield more to children in the concrete-operational stage than to children in the pre-operational stage; 22 percent of the time for pre-operational children and 39 percent of the time for concrete-operational children (Ward, Wackman, and Wartella 1977a).

Ward, Wackman, and Wartella (1977a) not only investigated the mother-child interaction dyad in terms of yielding behavior, but also in terms of how often mother and child discussed television advertisements. A purpose of their investigation was to determine the extent to which mothers teach their children about the intent of commercials, and about products and brands within product classes. The results suggest that 60 percent of the mothers discussed with their children the advertised products and brands and

about 85 percent of all comments made by mothers about advertising were negative. The results also indicate that age differences were small; mothers of older children (eight to twelve years old) made a few more comments about television commercials than mothers of younger children (five years old). Thus, to the extent that children learn about brands from mothers, it is likely that television advertising will be presented as a negative influence (even though some advertising may be helpful as a pedagogical tool).

All in all, mothers did not appear to be overly concerned with teaching their children about products and brands. They only were concerned with teaching their children how to be good or effective consumers (Ward, Wackman, and Wartella, 1977a). This study is important because it suggests that parents do have a mediating effect on television exposure and toy request. The present study attempts to further this area of study by determining if mothers have a mediating influence on the type of dimensions which underlie children's brand preferences. Generally, the evidence on the degree to which mothers influence their children's consumer socialization suggests that the influence of mothers depends on the age of the child.

Therefore, the major purpose of this study is to investigate the influence of mothers via the degree to which mothers' brand preferences appear to predict children's brand preferences. Specifically, the degree to which the dimensions used by mothers in making brand preference judgments overlap with the dimensions used by their children is investigated. It is assumed in this study that children and mothers have a common salient set of dimensions underlying brand preference, but that the specific dimensions used in making a particular preference judgment may differ. This is an assumption that is dealt with in detail in the Results section of the manuscript.

Methodology

Research Design

Children in two age groups, four to five and eight to nine and their mothers were chosen to perform the task of 28 paired-comparisons (David 1963) on stimulus sets of 14 beverages and 14 cereals. Subjects were chosen in such a manner as to maintain representation across gender, age, and two levels of socio-economic status within a large western metropolitan area. School districts were contacted and approval was sought. Letters were then sent out to parents soliciting the cooperation of themselves and their child. This process resulted in achieving a sample size of 104 children and their mothers.

Stimulus Sets

Cereals and beverages were chosen according to the most popular in terms of gross sales in the geographical area for which the study was conducted. Photographs were taken of each stimulus and then laminated on a 3x5 card for easy access. In the situation where a beverage is displayed in both bottle or can, the photograph of the beverage was taken with both containers. An effort was also made so that of the 14 cereals and 14 beverages chosen, 3 were considered to be adult brands and 11 were considered to be children's brands.

Task

Mothers and children both performed paired comparisons on 28 sets of stimuli for both product categories. This method was adopted by David (1963) which reduces the general task of 91 comparisons when using 14 stimuli per set. In this linked-paired comparison method, each stimuli and each pair of stimuli have an equal chance of appearing across 13 subjects. Older concrete-operational children also performed an attribute rating task across the 14 cereals and beverages. These results were used in the analysis of dimension overlap between mothers and their children.

Cognitive Stage

In this study, age was not used as a surrogate for cognitive stage. All children in the study received 3 test (Inhelder and Piaget 1964), which is part of a battery of test to determine cognitive stage. A criterion of two out three would classify a particular child as either pre-operational of concrete-operational. Data were collected from 52 children in each age group. The results of the test to determine cognitive stage produced 47 children in the pre-operational stage and 57 children in the concrete-operational stage.

Data Analysis

Testing the overlap of dimensions that underlie brand preference formation between mothers and their children was accomplished in three steps. First, individual MDPREF (Chang and Carroll 1969) solutions for children and for mothers were obtained. This resulted in separate solutions for pre-operational and concrete-operational children and a three dimensional solution for mothers. Second, the number of dimensions in the solutions for both children and parents were determined. Third, simple regression analyses matching dimensional weights for each dimension between mothers and children were performed to determine the relationship between mothers' dimensional weights and their children's dimensional weights. Simple regression was appropriate because there was only one independent and one dependent measure matching individual dimensions from mother's and children's space solutions. It was also used because it was the most straightforward analysis for determining if values on a dimension for mothers predict the values on the same dimension for children. This outcome helped to detect parental influence (i.e., the evaluation of the experience between the mother and child dyad) in the processes of children's brand discrimination and brand preference formation.

Results

Subject Preference Spaces - Mothers and Children

Analyzing the subject spaces (i.e., individual preference vectors) between mothers and children via regression analysis describes the relationship (if any) between the types of dimensions used by these groups of subjects in preference. Specifically, mothers' preference vectors were regressed on children's preference vectors.

Before regression analysis was performed, an MDPREF solution for mothers was generated. Mothers' cereal preferences were represented in a three dimensional space as suggested by FITA2B correlational analysis (Schonemann and Carroll 1970). This analysis was performed using a split-half procedure. The correlations between dimensions of the split-half analysis were .93, .67, .58, for dimensions one, two and three, respectively. Dimension one explained 22% of the variance, dimension two explained 17% and dimension three explained 14%. Dimension four only explained an additional 8% and therefore was not included in this analysis. The fit between the data and the vector preference model was .35 in one dimension, .53 in two dimensions and .61 in three dimensions.

In the case of children, FITA2B analysis between the dimensional weights by cognitive stage produced a zero correlation for a three dimensional solution. Thus, 5 distinct and separate dimensions were the results of MDPREF for children's brand preferences. For pre-operational children, the variance explained by the first dimension was 43%, and the second dimension explained 39%. The correlation of fit between the data and the vector model was .32 with one dimension, and .50 with two dimensions which represents an average fit. Considering concrete-operational children, the first 3 dimensions explained 73% and the fit between the data and the model was .88, .51 and .61 for the three dimensions, respectively.

With respect to preference judgments made for cereals by mothers and pre-operational children, the results of regression analysis (presented as correlations of all the possible combinations between mothers' and children's brand preferences) reveal that a statistically significant relationship between the preference spaces for these two groups of subjects does not exist (results are presented in Table 1). This finding suggests that the dimensions used for making preference judgments for cereals were different between mothers and pre-operational children.

TABLE 1

RESULTS FOR CORRELATION ANALYSIS OF MOTHERS' DIMENSIONS AS PREDICTORS OF CHILDREN'S DIMENSIONS FOR PREFERENCE JUDGMENTS

Cognitive Stage	Mothers Product	Cereals		
		Dimensions		
		1	2	3
Pre-operational	D1	.049	-.128	.176
	D2	.099	-.064	.129
Concrete-Operational	D1	-.202	.114	.106
	D2	-.146	-.384*	.218
	D3	.036	.135	-.113
Combined	Mothers Product	Beverages		
		Dimensions		
		1	2	3
Combined	D1	-.030	-.132	-.181
	D2	.020	.029	.063

*p < .05

A slight relationship did exist between mothers' preference judgments for cereals and their concrete operational children's preference judgments. Of the nine possible combinations of correlating two, three dimensional spaces, a statistically significant relationship existed for matching dimension two of the mothers' space with dimension two of the children's space, R = -.384, significant at the .05 level. The negative direction of this correlation implies an inverse relationship on this dimension. The inverse relationship on dimension two suggests that preferences for concrete-operational children are based on the attributes unhealthy, children's cereal, liking the cartoon character, while mothers' preferences are based on the perceived attributes of healthy, adult's cereal, disliking the cartoon character. Because only one of fifteen correlations was significant, it is concluded that a very weak relationship exist between the dimensions (evaluative criteria) used by mothers and children in their cereal preferences.

Subjecting mothers' beverage preference scores to MDPREF, produced a three dimensional solution. This was based on FITA2B analysis where the dimension correlations between split-half runs were .87, .84, .61 for one, two, and three dimensions, respectively. Dimension one explained 24% of the variance, dimension two 16%, and dimension three 15%. Dimension four explained only 9% of the variance and was not included in this analysis. Examining the fit between the data and the vector model produced the following result; chi-square was .35, .44, and .59 in one, two, and three dimensions, respectively.

Children's brand preferences for beverages were captured in a combined two dimensional solution. Correlations were .78 and .95 for dimension one and two, respectively. Seventy-eight percent of the variance was explained in the combined cognitive stage two dimensional solution. The goodness of fit between the beverage preference data and the vector model in two dimension was .38 and .51, respectively.

Upon performing correlating analysis of the beverage preference data, it was determined that a non-significant relationship exists between mothers' and children's preference solutions (refer to Table 1 for the nonsignificant R's). This result suggests that children and mothers make preference judgments for beverages based on different dimensions.

Stimulus-Spaces - Mothers and Children

Table 2 presents the correlations between mothers' preference stimulus space and their children's preference and perceptual stimulus spaces by product category. The purpose of this analysis was to determine the relationship (if any) between mothers' brand preferences and their children's brand preferences and brand perceptions. The correlations were determined by using the Schoneman and Carroll FITA2B analysis incorporating stimulus weights from each of the separate ALSICAL and MDPREF solutions. These correlations were used to assess the overall fit between mothers' and children's spaces by rotating one space to another space via a least squares fit rotation. Generally, results from these correlations imply that mothers' preference judgments are more closely related to their children's preference judgments for beverages than for perceptual judgments of beverages. This result implies that mothers and children are likely to prefer the same beverages. That is, the projections of the stimuli (beverages) onto the dimensions were similar. Although these projections appear to be similar, the product moment correlation between the preference scores (means) for the two groups was .12, nonsignificant at the .05 level. This statistic indicates a low correlation between the beverages preferred by children and their mothers. However, for cereals, mothers' preference judgments were more similar to their children's perceptual judgments than their children's preference judgments. Comparing children's cereal preference scores with their mothers' preference scores produced a product moment correlation of .42, nonsignificant at the .05 level. One explanation for this inconsistency is the measure of analysis. In one case, stimulus projections and dimensions are being compared, and in the other case, raw preference scores (means) are being compared.

Discussion And Conclusions

Mother-Child Dimension Overlap - Subject Spaces

Although many researchers outside of marketing have stressed that mothers have an identifiable influence on their children's cognitive abilities, this study has failed to demonstrate that mothers exert much influence over children's brand preference formation. Children appear to develop their own criteria for preferring brands of cereals and beverages that do not correspond with their mother's criteria.

TABLE 2

RESULTS OF CORRELATION ANALYSIS BETWEEN MOTHERS' AND CHILDREN'S STIMULUS SPACES BY PRODUCT CATEGORY AND DIMENSIONS

Mothers	Children Brand Perception		
	D1	D2	D3
<u>Cereal</u> Preference	.78	.57	.23
<u>Beverage</u> Preference	.73	.18	
Mothers	Brand Preference		
	D1	D2	D3
<u>Cereal</u> Preference ^a	.28	.97	
Preference ^b	.55	.46	.25
<u>Beverage</u> Preference	.71	.89	

a) ^a = pre-operational children

NOTES: At the .05 level of significance, the control correlation = .52.

There was an inverse relationship between attribute weights of dimension two (unhealthy, child's cereal, liking the cartoon character) for mothers and concrete-operational children with respect to the cereal preference judgments. The data suggest that the more favorable concrete-operational children were to the attributes comprising the dimension, the less likely mothers were in using these attributes as a basis for cereal preference. No relationship existed between mothers' dimensions and concrete-operational children's dimensions used in beverage preferences. The least amount of similarity in dimension overlap occurred between mothers and pre-operational children. There were no similar dimensions between mothers and pre-operational children. In summary, the overlap between mothers and concrete-operational children was at best, only slight. Thus, there is not enough evidence to support the proposition that mothers exert much brand preference influence on the dimensions used by their children for making brand preference judgments. In order to determine if other family members influence brand preference, an investigation of fathers' or siblings' influence on the dimensions used in children's brand preference may have been useful, but was not considered in this study. These findings, although exploratory, do suggest that mothers do not appear to teach (indirectly via observation) their children about brands within these two products categories with respect to why some brands may be preferred over others.

Stimulus Spaces

Comparing the stimulus spaces (i.e., the dimension weights) for mothers' preferences with children's preferences and perceptions produced a unique finding. The greatest similarity occurred between mothers' preferences for beverages and children's preferences for beverages, and mothers' preferences for cereals and children's cereal perceptions. From this finding, the following inference can be made; similarity between brand perceptions and preference judgments made by mothers and children is product class specific. Although mothers and children have a tendency to prefer the same beverages, they use different dimensions in making these preference judgments about

beverages. For cereals, mothers and children do not prefer the same cereals nor do they use the same dimensions to make cereal preference judgments. One explanation for this is that beverages may not carry as strong an image as cereals regarding those that are considered to children's beverages and those that are considered to be adult beverages (excluding liquor). This would imply that the same beverages could be preferred between mothers and children. Another explanation is that within the product class beverage, some of the brands were merely differences in flavor and not actually brand differences. This limitation could contribute to a possible perception that beverages are more similar than are cereals. Less brand variation implies less preference discrimination between mothers and children.

Mothers' preference judgments (i.e., location of cereals in a preference space) for cereals were more highly correlated with pre-operational and concrete-operational children's cereal perceptions (i.e., location of cereals in a perception space) than with pre-operational or concrete-operational children's cereal preferences. This finding suggests that mothers' preference judgments for cereals are similar to their children's brand perceptions about cereals, implying a relationship exists between mothers' preferences and children's perceptions. A possible explanation for this is the traditional view of cognition preceding affect. Since adults are presumed to be more cognitively organized than children in either of the two stages tested, brand perceptions are stronger and brand evaluations (affect) have been molded into brand preferences. With pre-operational and concrete-operational children, brand perceptions are still forming and evaluations and preferences are even less stable. Thus, from a cognitive development perspective, it is possible for preferences of a group of mothers perceived to be more cognitively organized to correlate with the perceptions of a group of children. This explanation is limited in that some lack of aggregate correspondence does not necessarily mean lack of individual correspondence. Thus, on an individual basis, mother's cereal preference could coincide with their child's cereal preferences, but in the aggregate, do not. At best, this is only speculative as to the nature of this finding and it is still unclear as to why the finding is product specific.

Future research should consider the influence of fathers as well as siblings on children's brand preference formation. Another variable which may prove to be fruitful in understanding children's brand preference formation is birth order. Differences attributed to by gender and socio-economic status may provide even greater insight into children's preference formation.

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CHILDREN'S INFLUENCE IN FAMILY DECISIONS AND
CONSUMER SOCIALIZATION: A RECIPROCAL VIEW¹

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Abstract

In both family decisions and consumer socialization studies, research has to a large extent focused on the influence of parents on children. Because family communication and learning are not unidirectional, taking a reciprocal view of family decision making and consumer socialization will be a more realistic research perspective. That is, studying children's influence on parents, in addition to parents' influence on children, will yield a better understanding of these family phenomena. This paper reviews research on parent-child influence in family decisions and consumer socialization, and suggests propositions for future research on parent-child influence in both areas.

Introduction

Many studies have shown that children's purchasing decisions are influenced by parents through learning (e.g., Douglas 1983; Filiatrault 1980; Moschis and Churchill 1977, 1978; Szybillo et al. 1977). Fewer studies have dealt with how parents may acquire consumer skills from their children. We feel that adopting a reciprocal view of family decision making will yield a fuller understanding of both interactive consumer learning in the family and family decision making as a whole.

The decision making process occurring in the parent-child dyad has been studied under the heading "consumer socialization". Since this is a relatively young field of study with multidisciplinary roots (i.e., family sociology, social psychology, child development and consumer behavior) there are several definitions of socialization. Researchers have had difficulty in arriving at a definition that is sufficiently precise to be empirically useful while maintaining its appropriateness to the wide range of behaviors, events and social conditions to which it is commonly applied (Gecas 1981; Tallman et al. 1983). In marketing, socialization has been defined as the process of learning consumer-related skills, knowledge and attitudes (Ward 1974). We adopt a somewhat broader definition where socialization refers to "the ways in which individuals learn skills, knowledge, values, motives and roles appropriate to their position in a group or a society" (Bush and Simmons 1981, p.134).

Informal observation readily provides instances of purchase decision situations in which children have greater product knowledge than their parents. In such situations, they can logically be expected to express that knowledge and thus contribute to decision outcomes by two routes--direct expression of their preferences, and influencing parental preferences by communicating new knowledge (reverse socialization). For example, in families considering the purchase of a home computer, children may have the most product knowledge because they encounter and use computers on a daily basis at school. Parents who are homemakers or who do not use computers in their jobs are likely to have little knowledge of computers and as a result are perhaps more open to children's contributions in the decision making process.

Recent changes in demographic and household structure may have significantly increased children's impact on parental decisions and general involvement in family decision

making. For instance, the rising number of single-parent households may lead to increased decision involvement for children. It is estimated that by 1990 only 69 percent of the children in the United States will be raised by both parents (Glick 1984). Currently, approximately one-fifth of all families with children are headed by women as single parents (Kantrowitz 1986). Additionally, many households today have both parents working full time. These alternative family structures face on the whole the same number and type of family decisions to make, but are likely to have less parental time to devote to these decisions than a standard nuclear family. Such "time poor" families may permit or actively encourage increased child participation in family decision making.

The purpose of this paper is to:

- (1) review research on the parent-child dyad of family purchase decisions as well as consumer socialization; and
- (2) advance propositions for future research on parent-child decisions from the perspective of "reverse socialization," the process by which parents acquire consumer skills and knowledge from their children.

We believe that family decision making and consumer-socialization are closely linked; that is, decision making in the parent-child dyad often serves as a vehicle for consumer socialization of both parents and children. We begin with a brief discussion of the types of influence focused upon in family decision making and consumer socialization studies. Consumer variables that have been found to be related to family decisions and consumer socialization are then reviewed, and propositions are presented regarding the effect these variables are expected to have on reverse socialization. Finally, methodological considerations are briefly discussed.

Types of Parent-Child Influence

The types of influence examined in family decision making and socialization studies can be broadly differentiated. Influence in family decision making studies characteristically focuses on whether an individual's wishes are acted upon in a particular decision situation. Studies attempt to measure preference, decision dominance, and occasionally the exercise of social power (e.g., Cox 1975; Olson 1969; Olson and Rabunsky 1972; Shuptrine and Samuelson 1976). Previous consumer socialization studies, on the other hand, view influence from the perspective of a socialization agent. As such, they attempt to measure communication and the learning of knowledge and skills (e.g., Moschis and Churchill 1977, 1979; Moschis et al. 1984; Ward 1974; Ward et al. 1977). As a socialization agent, a child influences the parents behavior by teaching them new knowledge and consumer skills. A child's influence can actually lead to internalized and lasting changes in values, self-concept and consumption behavior on the part of the parents. The "yielding" discussed in parent-child decision making studies (i.e. Atkin 1978; Berrey and Pollay 1968; Roberts et al. 1980; Ward et al. 1977) is merely compliance with the child's request, and may not involve internalization of new values, skills, or roles.

Forming a purchase preference can be viewed as a learning process. When family decision making studies request individuals to state their purchase preferences or purchase influence, they are asking for information on the outcome of a process, not the process itself. Such questions are more simple to ask and answer than those which request individuals to remember the preference formation

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process and report on the roles others (i.e., socialization agents) played in it.

Children and Family Decisions

Most studies examining children's influence fall into this category. Influence is measured by opinions, statements of personal preference, and decision outcomes; not by learning or knowledge acquisition. Atkin (1978) observed children between the ages 3 and 12 in 20 supermarkets. In two-thirds of the cases, the child expressed a desire for a particular cereal; and in most of those cases, the parent agreed to the cereal selection. The authors concluded that parents were more likely to yield to product requests when the product was primarily for the child's consumption. Roberts et al. (1981) found mother's attitudes and perceptions of children's influence to be related to economic, health, and child-rearing philosophy factors (i.e., liberal- versus conservative-orientation). Larger numbers of preference statements by children were associated with a higher rate of product usage in the family. In this study as well as the others discussed above, children's influence was measured by their statements of personal preference and the extent to which these matched purchase outcomes.

Children and Socialization

Moschis and Moore (1979, 1984) discuss consumer socialization based on two types of learning. The first, social learning, refers to socialization as a function of environmental influences on a person. Various socialization agents in the environment (such as parents, media, and peers) act as learning media. The second type of learning, cognitive development, is a cognitive psychological process of adjustment to one's environment. Essentially, cognitive development refers to learning which occurs as a function of information processing maturation. Moschis and Moore (1979, 1984) combine both the cognitive and the social learning perspectives in their studies.

Another type of child's influence on parents concerns what we propose to label as "reverse socialization," or parents' acquisition of consumer skills and product information from their children. Most research in child development has been from a unidirectional viewpoint in which the effects of parents' behavior on children's socialization has been studied. This assumes a simple asymmetrical causality model where parents shape children (Cromwell and Olsen 1975). The child, however, may also shape his/her parents. Bell (1968, 1971) has criticized the view that the parent is the initial agent of culture and the child is the object. He views parent and child as a social system in which each participant's responses constitute stimuli for the other. The effect of children in socialization of their parents is emphasized in his study although it is from a unidirectional viewpoint.

The importance of considering the reciprocal nature of parent and child roles was stressed by Brim (1957). Also, the norm of reciprocity was found in an empirical study on intergenerational relationship and family development performed by Hill et al. (1970). Brim (1966, 1968) discussed socialization as a learning process which occurs throughout a person's lifetime since cognitive development never ceases (though the amount of learning is greater at an earlier age than at a later age). Bronfenbrenner (1979), Zigler & Child (1973), and Tallman et al. (1983) have emphasized that socialization occurs in the course of a relationship and involves learning as well as teaching. Although parents have the socially prescribed role of teachers while children are viewed as learners, it may be more realistic to describe parent-child socialization as one in which parents and their children are both teachers and learners. We therefore believe it is important to study not only how children and adolescents are socialized by their parents, but also how parents learn from their children through a reciprocal socialization process.

Examining television as a socialization agent, Churchill and Moschis (1979) found a significant relationship be-

tween amount of intrafamily communication regarding consumption and the extent to which adolescents hold economic motivations for consumption. A reciprocal relationship in terms of children socializing their parents after watching television has been discussed to a lesser extent, but not empirically demonstrated. Moschis and Mitchell (1986) found no significant relationship between an adolescent's exposure and a more influential role than parents in mentioning the need for the product, discussing the purchase of products, deciding what should be purchased, or actually buying the product.

Factors Affecting Reciprocal Socialization

This section examines factors expected to affect the reciprocal socialization process. First, previous studies on family communication between parents and children in the consumer behavior context will be discussed. Then, background factors including family structure and socio-economic characteristics will be reviewed. Personal resources, product-related factors, and satisfaction with decision outcome are also examined. As previous research is reviewed, we offer new propositions regarding how each factor is expected to affect children's influence on parents.

Family Communication Between Parents and Children

Family communication is expected to affect children's influence in family decision making. McLeod and Chaffee (1972) developed a typology that characterizes parent-child communication structure. In a socio-oriented communication environment the child avoids controversy and does not argue, since he or she does not want to risk offending others. In a concept-oriented communication structure, the child is encouraged to develop his or her own ideas. The presence or absence of these two communication patterns describes four family types: laissez-faire families exhibits low levels of both patterns; protective families stress socio-orientation and avoid conflicts; pluralistic families have a concept-orientation and encourage communication; and consensual families emphasize both the socio-oriented and the concept-oriented view.

Moschis (1985) suggested that a concept-oriented family communication structure would foster greater participation in family decisions, while a socio-oriented structure would deter participation. An empirical study by Moschis et al. (1984) found that pluralistic families were more likely to use positive reinforcement and less likely to engage in negative reinforcement. Parents in consensual families used both types of reinforcement, while protective families were more likely to use negative reinforcement. Laissez-faire families used little reinforcement of any type. The authors also found that a socio-oriented communication pattern was negatively related to an adolescent's influence on his or her parents in deciding on a purchase and in actual purchases.

The studies discussed above demonstrate a relationship between family communication patterns and how children are socialized. Considering socialization as a reciprocal process, family communication pattern is also expected to explain how parents are socialized by their children. This has been dealt with in a few studies but only indirectly. As noted above, Roberts et al. (1981) found that liberal versus conservative child-rearing orientations affect the extent to which children are described by their mothers as having influenced purchase decisions.

It is expected that a child in a socio-oriented family environment will be less likely to influence his or her parents, or act as a socialization agent with respect to them, than a child in a concept-oriented communication environment. The reason for this is that a child in a socio-oriented home is not expected to interfere and argue for his or her own ideas as readily as a child in a concept-oriented family, who is expected to develop his or her own ideas. The following proposition is therefore proposed:

P1: Children whose family communication pattern is characterized by a high concept-orientation will influence (socialize) their parents more than children whose family communication pattern is characterized by a high socio-orientation.

Family Structure

When studying family decision making, it is important to recognize and take into account ongoing changes in family structure. The statistics mentioned earlier on the rising number of single-parent families imply changes in children's relative influence in household decision making. A child in a single parent home might be allowed to participate in family decisions to a greater extent than a child in a nuclear family. The single parent may, for example, be more receptive to advice and opinions regarding his or her own clothes and products intended for the home.

Kourilsky and Murray (1981) examined the effect of economic reasoning on satisfaction within the family and found that single-parent families exhibited a higher level of economic reasoning and satisfaction compared to two-parent families. A possible explanation for this lies in the reallocation of decision tasks in families that have only one parental decision maker. Sinkula (1984) pointed out that quasi-households (or "broken families") are dynamic because separated parents might maintain a number of households during the separation period, take responsibility for the children only part of the time, and experience passages through the revised family life cycle at varying times. This should be recognized when research is done regarding single parent households.

Qualls (1981, 1984) discussed the impact on changing sex roles in family decision making. He suggested that changes in family member perceptions regarding sexual gender and division of labor have caused a shift in how decision making responsibility is allocated. He argued that a family member's sex role orientation determines the degree of family decision interaction: a sex-role modern family showed a more egalitarian distribution of family decisions, while a sex-role traditional family reach decisions through past role classifications. Heffring (1980) recommended more research on sex role orientations and family ideology, pointing out that sex-role egalitarian families are more likely to divide tasks, whereas sex-role traditional families are more likely to delegate tasks. The limited research on family structure, then, suggests that children's influence and participation in family purchase decisions will be limited in sex-role traditional families; children will have greater decision influence in sex-role modern families.

A single parent's suffering from task overload has been discussed by Glasser and Navarre (1965). The single parent might face difficulties in adjusting if the marriage has had a traditional sex-role orientation. If there is no support system available, the household will be less systematically organized and exhibit a higher level of family disorganization (Hetherington et al. 1977). Children in such families might replace the traditional support system; the resources they contribute may lead to a higher degree of participation and influence in family decision making. Furthermore, single parent mother-headed families often face financial difficulties. Bane (1977) reported that 51.5 percent of children under 18 in female-headed families were in families with incomes below poverty level. Children who earn an income and contribute to the family's income can be seen as having resources. The resources they provide might also lead to a greater influence in family decisions.

Based on the research discussed above, the following relationships between family structure variables and children's influence in family decision making are proposed:

P2: A child's influence varies with family structure:

1. A child in a single parent family will have more influence on family purchase decisions than a child in a two-parent family.
2. A child in a sex-role egalitarian family will have more overall decision influence than a child in a sex-role traditional family.

Socio-Economic Characteristics

A number of researchers have examined the effect socio-economic variables (mainly social class and income) have on socialization and children's influence in family decision making. Moschis and Churchill (1978) showed that family environment influences newspaper readership, which in turn influences the adolescent learning process. Their study confirmed that social class affects socialization. Consumer learning might occur as a result of structural factors that are present in higher socio economic classes (more opportunities for consumption). Different degrees of learning might also occur due to the different socialization practices that are emphasized by different socio economic families.

Moschis and Moore (1979) and Moschis and Churchill (1978) later did show that children from higher socio-economic backgrounds have more opportunity for consumption and are more aware of products available in the market. Roberts et al. (1981) found that economic factors (primarily family financial status) affected the extent to which mothers perceived children as having influenced purchase decisions. Atkin (1978) also found a difference between social classes in children's attempts to initiate cereal purchases. The amount of child initiation of purchase of breakfast cereals was higher for children from the middle class than for children from the working class. However, Moschis and Moore (1985), found no difference in the extent to which middle-class adolescents and lower-class adolescents discussed consumption with parents.

Socio-economic factors may help explain the extent to which children socialize their parents, as well as children's influence in family decision making. Families with higher socio-economic backgrounds may provide better opportunities for influence and be more receptive to their children's opinions. One reason for this is that they have more opportunities for economic consumption, which means that children have a greater absolute number of opportunities to influence consumption decisions. A second possible reason is that middle and upper-middle class families may encourage decision-making approaches that would result in greater child participation in purchase decisions, specifically, joint decision making and autonomic decision making (Evans and Smith 1969). It seems that a family with high education, more financial resources and/or more time might allow a child to express his or her opinions more and therefore exert more influence on decisions in the family. Accordingly, the third proposition is stated as follows.

P3: Children whose families are characterized by a high socio-economic status (i.e., high income, high social class, highly educated parents) will have more influence in family purchase decisions, both in terms of relative influence and as socialization agents.

Personal Resources

Resource theory developed by Blood and Wolfe (1960) asserts that the comparative resources of parents and children will determine who dominates in family decisions. Children's resources may include income contribution, employment status, education, grades, or parental love and affection. The greater the individual's resources, the greater his or her decision making power. In the past,

studies based on resource theory have explained the husband's dominance in family decisions on the basis that he earns the most income. However, the change in family structure with more working wives has led to increased influence for wives in family decisions.

Similarly, children's personal resources should affect their relative influence in family decision making. For instance, being the first-born child may be regarded as a personal resource. Churchill and Moschis (1979) expected birth order to be related to the amount of communication between adolescents and parents on purchase decisions. They hypothesized that a first-born adolescent would interact more frequently with his or her parents regarding consumption matters. Their study found a positive but nonsignificant relationship between birth order and family communication: the first-born child does not necessarily communicate more with parents than do other children. Perhaps researchers should also measure specific behavioral influences (e.g., the number of times the child goes shopping with the parents, how active he or she is in suggesting product features or brands).

In terms of financial resources, Moschis and Mitchell (1986) proposed that young people who earn more money outside the home are less likely to mention the need, discuss the purchase, decide whether to buy and also to be independent in purchasing products for individual or family use. Their findings supported the idea that adolescents with more money have more purchasing independence but failed to support expectations regarding the other stages of the purchase process. The greater the child's personal resources, the greater his or her influence in the family decisions. It is therefore proposed that:

- P4: A child's relative influence in the family decisions will be positively related to the child's personal resources.

Product Related Factors

Product-related variables expected to affect children's relative influence in family decisions and the extent to which they function as socialization agents for parents include product importance and product knowledge. Consumer socialization studies have shown that parents' influence on children varies depending on a child's knowledge of the product and perceptions of product importance. For instance, Moschis and Moore (1979) found that parents are preferred twice as much as other information sources for purchases of wrist watches and pocket calculators. Parents' influence was found to increase with high-risk products or products that the child knew little about. The same study also found that parents had relatively low influence at the product evaluation stage of the decision process; price and brand name were the most important evaluative criteria at this stage. It appeared that product attributes outweighed social influences, although this varied depending on product type.

Roberts et al. (1981) found that a higher degree of children's influence was associated with a higher rate of product usage by the family. A reasonable explanation for this finding is that children more frequently attempt to influence decisions on products they consider to be important. Also, parents may consider products used frequently to be less important purchases, and may be more open to children's influence attempts in these decision areas. Krishnamurthy (1981) also suggested that the person who is more involved with a product will be more active in the product decision process and have a greater effect on the decision outcome.

To summarize, a child is expected to be more influential in family decision making regarding a product he or she perceives as important. The reason for this is that he or she will likely become more actively involved in the family decision process. It is also reasonable to expect, however, that parents' perceptions of product importance and parents' product knowledge will moderate children's influence. For example, parents might be less likely to

accept children's influence on products for parents' personal use but more likely to accept children's influence on products for children's exclusive use. The following proposition is therefore stated:

- P5: A child will have greater influence in family decision making for product purchase decisions:

- 5.1. that he or she considers important, and
- 5.2. about which he or she has a high level of product knowledge.

Satisfaction with Family Purchase Decisions

After discussing how product importance and knowledge relates to involvement in family decision making, it is logical to address the issue of whether increased involvement in the decision process leads to increased satisfaction. Burns' (1976) study found that spouses who are highly involved in a decision derive satisfaction from their influence. Kourilsky and Murray (1981) suggest three situations when a family member may be dissatisfied with the group decision-making process. First, the cost of participation has not been fully explained to the individual or the group so they knew what they had to forego as a result of the pending decision. Second, the family member may not have participated sufficiently in the ranking of benefits. Finally, the family member may believe that his or her self-interest is inconsistent with family cohesiveness. Their empirical findings supported the hypothesis that economic reasoning would increase satisfaction; that is, they found that the economic and psychological involvement concomitant to cost-benefit analysis did contribute to child and parent satisfaction.

The question can then be asked if the child who is allowed to participate in family decision making is more satisfied than a child who is not allowed to participate. Robertson et al. (1985) studied parent-child interaction effects on children's satisfaction in the age group 6-11 years old. Satisfaction was found to be greatest among older children and children from homes with high parent-child interaction. The findings also indicated that parent-child interaction related positively to satisfaction, especially among younger children. This might imply that older children are less responsive to parent-child interaction and learn more through direct experience and modeling parental or peer behaviors. Older children also showed more disappointment when they did not get what they expected. Additionally, Shaffer (1971) argued that households sometimes plan for satisfaction for the household as a unit and this might not lead to maximized satisfaction for any one member. This possibility should not affect our final proposition, which is stated in relative terms:

- P6: For products he or she perceives to be important, a child who participates in family decision making will be more satisfied with the decision than a child who does not participate in the decision process.

Methodological Considerations

Proposing the study of children as family decision participants and socialization agents with respect to parents invites all the problems of studying dyadic family decision making previously discussed (e.g., Burns and Granbois 1980; Davis 1976; Dunsing and Hafstrom 1975; Foxman 1986; and Heffring 1980), plus a number of new ones. As in husband-wife studies, methodological issues that relate to children's roles in the decision process can be considered under four headings: questions regarding the meaning of influence, questions relating to respondents, questions relating to decision topic, and questions relating to data collection mode.

Influence

An individual's influence in family decision making studies has often been conceptualized as a dichotomous construct: if the individual's prior preferences match the decision outcome, the individual is said to have influence, or to dominate; otherwise the individual does not have influence or dominate. Examining studies of parent child decision making suggests a further distinction would be useful: that is, a child's influence through parental "yielding" should be studied separately from children's influence as a result of reverse or reciprocal socialization. "Yielding" indicates parental indulgence rather than child influence and ideally should be measured separately from influence resulting from children's effect on parents' knowledge, consumer skills, or viewpoints. Operationalizing this distinction in a meaningful and reasonably natural way appears to represent a considerable challenge for researchers in this area, however.

Respondents

In dyadic family decision making studies, a long-standing issue has involved which spouse is the appropriate respondent in family decision making studies and whether it is necessary to obtain responses from both spouses. There is movement in recent studies to obtain data from both spouses, but how to combine or weight this dyadic data is by no means a settled issue.

Cromwell and Olsen (1975) criticize parent-child interaction studies to have focused only either on a parent (usually the mother) or on a child. A small percentage of studies have involved both the mother and the child. There is a need for research which include the entire family. It seems clear that family decision making studies which focus on children's roles should include responses from at least one child and both parents. For example, some of the propositions advanced in this paper, especially the ones relating to reverse socialization, would ideally use a measure of parents' perceived learning from the child socialization agent as a dependent variable, and would seek to predict and explain levels of this variable based on certain characteristics the child perceives himself or herself to have. The issue of combining or weighting respondent data would, of course, continue to be a problem in decision making studies that include children. There are also two special problems associated with this type of study--which age range to study and whether it is productive to study certain age groups.

Broadly speaking, the term "children" in the U.S. can include all dependent offspring in a family. Because children's cognitive abilities are rapidly changing as they mature and because these changing abilities are likely to relate to their influence in the family, it is desirable to include a broad range of ages in child decision making studies. To do so, however, necessarily makes such studies administratively more difficult and analytically more complex. Age would at least have to be controlled for in the analysis of empirical data from a broad age range of children. In cases where cognitive development stages can be identified and appear to be closely related to the phenomenon being studied, it would be advisable to group responses by stage and analyze by group.

Also, there is a real question whether younger children are useful respondents. They may not understand either the relationships or the concepts under investigation and in some cases will lack both familiarity with and interest in the products being studied. A four-year-old, for example, may know what cars are but may lack knowledge and interest in the product per se.

We believe the age range starting from adolescence to be more appropriate for investigating consumer socialization of parents. While babies and younger children may have a powerful influence in socializing adults into parental roles, this influence does not focus directly on acquisition of consumption skills. Furthermore, including children younger than adolescent age (less than 11 years old)

is not appropriate for consumer socialization studies; such children are not fully cognitively developed (Elkind 1968; Mussen et al. 1969; Piaget 1970) and have been demonstrated not to understand economic concepts (Strauss 1952) and consumer skills related to information processing (Roedder 1981; Wackman and Wartella 1977).

Decision Topics

It is apparent from previous research that one likely source of variance in children's decision influence will be the particular product under consideration. It will be desirable to gain some understanding of how perceived product importance (from both children's and parents' points of view) affects children's decision influence. It may, however, not be advisable to aggregate children's influence measurements across these different product categories.

Data Collection Method

As with other dyadic family decision studies, observation would ideally yield an accurate picture of the decision making process. In fact, however, it has not in the past: its intrusiveness as a data collection method has sensitized respondents, and its poorly developed methodological procedures have made it difficult to use. Self-report methods have been most used in past family decision studies; they are likely to remain the method of choice for studies of children's influence in family decisions. However, the drawbacks of self-report methods, especially with younger children, must be taken into account.

Summary and Conclusion

To investigate family decisions between parents and children more realistically, we believe that it is necessary to adopt a reciprocal view of consumer socialization of how both parents and children may learn from each other. A significant amount of research exists regarding parents' influence on children. There is, however, a need for more research regarding children's influence on parents. The propositions advanced suggest that a child's influence differs under different circumstances. The type of family communication environment will affect a child's potential influence in family decisions. Family structure (i.e., typical two-parent or single-parent family, and sex-role) is also expected to affect a child's decision influence, as will various household socio-economic characteristics. We also propose that a child's influence will depend on his or her personal resources. The product's importance and the family's knowledge about the product to be purchased are expected to influence the child's involvement in family decisions as well. Finally, we believe that children who are more involved in family decisions will experience greater satisfaction with decision outcomes. The research we propose regarding children's influence on parents will advance the study of family decision making. It will do so by yielding a better understanding of reciprocal family interaction and hence of the way in which the household unit actually functions.

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PRODUCT KNOWLEDGE AS AN EXPLANATION FOR AGE-RELATED
DIFFERENCES IN CHILDREN'S COGNITIVE RESPONSES TO ADVERTISING

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ABSTRACT

Past research has found that children's responses to advertising differ by age. Of the variables associated with age, those which account for these differences have not yet been determined. This paper investigates the acquisition of product knowledge as an explanation of age-related differences in children's cognitive processing of advertising. Results of an empirical study indicate that product knowledge provides an incomplete explanation of age differences in cognitive response to advertising. Knowledge about advertising, strategic knowledge, and developmental maturity are suggested as variables for future research.

INTRODUCTION

Age has surfaced as a major variable in describing individual differences in children's reactions to advertising. However, age encompasses many factors that may be the cause of such differences. Although it has been shown that older children can process advertising messages better than younger children, it is not clear whether this ability stems from their increased knowledge about the products being advertised or from other elements that change with age, such as developmental maturity. This distinction has practical as well as theoretical significance. If it can be shown that age differences disappear when product knowledge is equal across age groups, it would indicate that younger children might be able to increase their abilities to process advertising messages by acquiring product experience and knowledge. On the other hand, if age differences are due to developmental maturity, little could be done to increase the abilities of younger children.

This paper investigates the acquisition of product knowledge as an explanation of age-related differences in children's cognitive processing of advertising. A brief description of children's responses to advertising found by consumer researchers is followed by a discussion of some of the relevant research in cognitive psychology. Hypotheses derived from this work are presented and tested empirically. The paper concludes with a discussion of children's information processing.

BACKGROUND

Age-related differences in children's reactions to advertising are a robust finding in consumer research. Research evidence indicates that older children are better able to distinguish TV advertising from programming (Robertson and Rossiter 1974; Ward, Reale, and Levinson 1972), exhibit a greater degree of skepticism towards advertising (Blatt, Spencer, and Ward 1971; Roberts et al. 1980; Robertson and Rossiter 1974; Ward, Wackman, and Wartella 1977), and recall a greater amount of commercial contents (Blatt, Spencer, and Ward 1971; Ward, Reale, and Levinson 1972; Rubin 1974; Ward, Wackman, and Wartella 1977) than younger children. These observed differences have frequently been attributed to cognitive development, most specifically, Piaget's theory of cognitive stages (Rubin 1974; Ward, Wackman, and Wartella 1977).

Piaget's theory views progress in children's cognitive skills as a series of four major stages through which children pass as they grow from infancy to adulthood (see Flavell 1963; Piaget 1983; Piaget and Inhelder 1969). Stages are defined by children's capabilities to mediate incoming stimuli. These capabilities are believed to result from both experience and maturation.

Since this study does not deal with very young children, only the two later stages in Piaget's theory

are discussed here. These two stages span the ages from 7 to 15 and represent an important group of consumers. In the "concrete operational" stage (ages 7 to 10), thought is primarily in terms of concrete objects and the immediate present. A child in this stage might tell you that an apple fell from a tree because it broke off of its branch. A "formal operational" child (age 11 to 15) will be more likely to tell you that gravity caused the apple to fall. It is in this later stage that the child's thought becomes guided by abstractions. Flavell (1963, p. 205) summarizes the basic change in orientation that occurs between these two stages:

No longer exclusively preoccupied with the sober business of trying to stabilize and organize just what comes directly to the senses, the adolescent has, through this new orientation, the potentiality of imagining all that might be there - both the very obvious and the very subtle - and thereby of much better insuring the finding of all that is there.

Although observed age differences in children's reactions to advertising have often been attributed to Piaget's theory of cognitive development, few if any of these studies used measures of cognitive development other than age. Perhaps the observed age differences were due to increases in knowledge of products rather than to the change in orientation from the concrete to the abstract that defines the difference between these developmental stages.

Research in cognitive and social psychology has clearly demonstrated the critical role of prior knowledge in information-processing activities (e.g., Chase and Simon 1973; Chi, Glaser, and Rees 1981; Chiesi, Spilich, and Voss 1979; Larkin et al. 1980). The accumulation of knowledge is also suggested as a major factor in children's development of information-processing abilities. Chi (1981) has argued that progress in cognitive development is due largely to knowledge increases in content areas. "Content knowledge" refers to specific knowledge of facts and concepts within a particular content area or domain and knowledge of how to solve problems and accomplish tasks within that domain. "Strategic knowledge" refers to knowledge of problem-solving procedures which can be applied across specific content areas.¹ For example, knowledge that rehearsal is a useful aid for remembering can be applied to any content area.

Chi has explored the distinction between content knowledge and strategic knowledge on memory performance as measured by recall and clustering tasks (Chi 1978; Chi and Ceci 1985; Chi and Koeske 1983). For example, in a case study involving a single child and knowledge about dinosaurs, Chi and Koeske (1983) found memory performance to be a function of greater knowledge about classes of dinosaurs (content knowledge). Since a single individual was studied, general strategic knowledge was exactly the same across performance sets. Only the content knowledge varied.

Chi (1978) also found that knowledgeable children could out-perform adults on a recall task. Chi compared the performance of children who were knowledgeable about the game of chess to adults who were novices in this domain. Both groups were shown a chess board with

¹The terms content knowledge and strategic knowledge have been used in the literature on children to refer to the concepts termed "declarative knowledge" and "procedural knowledge" (see Anderson 1980).

pieces in a mid-game position, and later were asked to reconstruct the board from memory. The children did remarkably better than adults in reconstructing the locations of pieces. Lindberg (1980) conducted a similar study using word listings and obtained concurring results. These findings suggest that possession of content knowledge can overcome a lack of age-related strategic knowledge. Flavell comments (1985, p. 115):

Just how much of postinfancy cognitive development can ultimately be accounted for by the acquisition of domain-specific knowledge is currently one of the "hot issues" in the field.

The ability to apply product knowledge to a specific advertising situation may depend on the child's knowledge of information-processing strategies i.e., strategic knowledge. Roedder (1981) has categorized children into three types based on their knowledge of information-processing strategies. These three types are characterized by increasing abilities to focus attention and to use sophisticated storage and retrieval strategies. Strategic processors (ages 10/11 and up) spontaneously employ sophisticated storage and retrieval strategies. Cued processors (ages 6-9) do not automatically use effective strategies for processing, but can do so when instructed in useful techniques. Limited processors (under 6) cannot use information-storage and retrieval strategies even when prompted to do so. However, the ability to use more complex processing may occur later than proposed above. When the task involves the allocation of attention to central and incidental material, strategic processing does not occur until 13 years, and cued processing does not occur until 8 years (Roedder 1981). It is important to note, however, that Roedder's work did not consider changes in content knowledge as part of cognitive growth.

In summary, various explanations for age-related differences in children's processing of advertising have been discussed. Piaget's theory of cognitive development suggests that children's thought processes progress in stages, which are qualitatively different in problem-solving orientation. These developmental changes may be due to increases in content knowledge, strategic knowledge, and/or to physiological maturation. Roedder's work reviews age-related differences that are due to differences in strategic knowledge. The work of Chi and others indicates that increases in domain-specific content knowledge may be a cause of age-related differences.

RESEARCH OBJECTIVES

This paper investigates the role of product knowledge, which is an area of content knowledge, on children's cognitive responses to print advertising. Product knowledge has been shown to affect the number and type of cognitive responses in adults (Edell and Mitchell 1978), and thus, is likely to affect cognitive responses in children. In young children, however, a lack of strategic knowledge or insufficient cognitive development may preclude the use of product knowledge to generate cognitive responses. Thus, in this study, two questions were addressed. First, do younger children who possess knowledge about a product class respond differently than unknowledgeable children of the same age to advertisements for that product class? In other words, are younger children able to utilize their product knowledge? Second, do these knowledgeable younger children respond differently than equally knowledgeable older children? In other words, does age provide an information-processing benefit independent of product knowledge?

The cognitive responses of interest in this study are those that involve elaboration, i.e., statements that are reactions to, qualifications of, or illustrations of the material in the communication (Cacioppo, Harkins, and Petty 1981). Elaborative responses can be

classified as counterarguments, support arguments, and source derogations (Wright 1973). Counterarguments require using prior knowledge to "argue" against implicit and explicit advertising messages. Support arguments are thoughts that favor the advertising message, and source derogations are thoughts that are critical of the advertiser or advertisement (Wright 1973).

METHODOLOGY

Children from two age groups with two different levels of product knowledge took part in the study. A group of 8 and 9 year old children, representing the concrete operational stage of cognitive development, was divided into two experimental conditions. Subjects in Condition 2 received a training session about the product class, designed to increase their knowledge level, while subjects in Condition 1 received a training session on a peripheral issue associated with the product class.

A group of 11 and 12 year old children was also obtained, representing the formal operational stage of cognitive development. This group was also a high knowledge group, and received the same training session as did subjects in Condition 2. Please see the Figure for a summary of the experimental design.

FIGURE
EXPERIMENTAL DESIGN

<u>Condition 1</u>	<u>Condition 2</u>	<u>Condition 3</u>
8-9 year olds	8-9 year olds	11-12 year olds
low knowledge	high knowledge	high knowledge

It will be noticed that only three groups have been included, unknowledgeable young children, knowledgeable young children, and knowledgeable old children. Unknowledgeable old children were not included because most older children had already acquired knowledge about the product class used for this study.

The subjects were asked to think aloud as they looked at a series of print ads. Their oral responses were tape recorded, transcribed, and then classified according to the coding scheme described later.

Subjects

Subjects were obtained from summer camps in North Carolina. To eliminate variations due to gender, only boys were used as subjects. All boys in the given age groups participated. The camps differed in socio-economic status and resulted in a heterogeneous sample. Within each camp, boys who had just completed the third grade were randomly assigned to either Condition 1 or 2. Boys who had just completed the fifth, sixth, or seventh grade were assigned to Condition 3. All ages fell within the bounds of the cognitive development framework that they were supposed to represent. Thirty-eight children successfully completed all aspects of the task: 11 in Condition 1, 13 in Condition 2, and 14 in Condition 3.

Stimulus ads

Print ads were used rather than TV ads because realistic TV ads are difficult and expensive to produce. Age differences in producing cognitive responses to TV ads may be greater than to print ads since younger children may have trouble keeping up with the information flow of TV. Because the print medium offers individual control of the rate of information flow, differences between age groups in responses due to "ability to keep up" are eliminated.

A hypothetical new brand of BMX bicycle (BMX stands for bicycle moto-cross) served as the subject of the

ads. The two ads used in the study included information that was deliberately false or inconsistent. In one ad, the headline claimed that the bicycle comes with a fork stander, but the ad did not show one on the large illustration of the bicycle. In the other ad, the sub-headline stated that one can do "endos" and "rockwalks" (two types of stunts) with the bicycle. But the ad pointed out that the bicycle does not have hand brakes (which are necessary to perform both the endo and the rockwalk). This ad also claimed a laid-back seat, but pictured a regular straight seat. The training sessions for Conditions 2 and 3 emphasized the information necessary to comprehend these contradictions. Rough sketches were provided to a graphic artist, who created authentic looking black-and-white advertisements.

In order to ensure that the discrepancies were noticeable, several BMX experts, aged 12-16, were asked if they noticed anything wrong with the ads. All were able to spot the inconsistencies. Although outright deceptions are relatively uncommon in advertising today, these ads ensured that the subjects had the opportunity to counterargue. If children do not counterargue against obvious falsehoods, it is highly unlikely that they would counterargue against more subtle forms of persuasion.

Dependent variables

The dependent variables were cognitive responses to the two ads. Oral thought listings were used in this study since writing is a chore for young children and might interfere with accurate expression of their thoughts. In addition, improvement in oral verbal ability appears to be less dramatic than improvement in writing ability between these age groups.

Responses were first distinguished as to whether they were elaborative or not. Non-elaborative responses include statements that simply repeat message arguments, such as "It says it has a fork stander." Elaborative responses were classified as counterarguments or support arguments and then further classified as relevant or irrelevant. Responses were classified as relevant if they dealt with the attributes or uses discussed in the training sessions. The coding of "irrelevant" simply meant that the response did not draw on the knowledge base under investigation. Relevant arguments were further classified as accurate or inaccurate. However, only one counterargument in this study was classified as inaccurate. Inaccurate support arguments are exemplified by "Neat, it has a fork stander," when the bike is pictured without one. One of the authors coded all of the data, blind to the experimental condition of the subject. No estimate of interjudge reliability exists for the data.

Control variables

Involvement with the product class was measured prior to any experimental manipulations. This measure was included because it has been suggested that involvement affects the generation of elaborative responses (Batra and Ray 1983; Greenwald and Leavitt 1984; Petty and Cacioppo 1981). The four items were four-point Likert scales and addressed liking for BMX bikes, interest in friends' bikes, interest in information about BMX bikes, and reading of BMX magazines. T-tests between the older group and the two younger groups on the involvement scale indicated that the younger children were significantly more involved with the product class than the older children ($p < .06$). Because the older children were less involved, this may somewhat counteract the age advantage of older children with respect to elaborations. Thus, involvement was included in the analysis as a covariate.

There was also a significant difference between age groups in the total number of responses generated for Ad 2 ($p < .05$). Because this may simply reflect an age difference in verbosity, a separate measure of verbosity

was included as a covariate. The measure came from the number of responses to an ad from a different product category (seahorses).

Procedure

A two day procedure was followed at each camp location. The boys were told on the first day that this research was being conducted for a possible new magazine for kids their age. To examine its effectiveness, they were about to receive instruction on some subjects that might be in such a magazine. Next, the children completed a scale measuring their involvement with BMX bikes, followed by the training sessions.

On the second day, the researchers administered a knowledge test. The test consisted of 27 questions of which 15 served as a manipulation check on the training sessions. Next, the verbal response procedure was explained to the group of boys at each camp. The children were individually shown four ads and their thoughts about each were tape recorded. The first ad provided the verbosity measure and was followed by the first of the two bicycle ads. A dummy ad fell between the bicycle ads. The order of the two bicycle ads was alternated as a control for order effects. The boys were allowed as much time as they wanted to complete their responses to each ad. All responses were transcribed from the tapes and then coded.

RESULTS

Knowledge Manipulation

The manipulation check indicated that the training was successful for the most part. Five items were dropped from the scale as suggested by reliability analysis ($\alpha = .88$). T-tests performed on the modified scale indicated that the rest of the training affected knowledge as intended. The trained group of eight and nine year olds performed significantly better ($p < .01$) than the untrained group. Young children in the trained group responded correctly to an average of 8.6 out of a possible 10 questions. The untrained group responded correctly to only 3.4. There was no significant difference between the children in Condition 2 and the older children (Condition 3), who averaged 8.9 on this scale. This was as intended.

Hypothesis tests

Analysis of covariance controlling for verbosity and product involvement was performed for each response type for each ad. An alpha level of .10 was used in order to increase the power of the tests. Because of the small sample size, the power of the tests is insufficient (.53) to detect a medium effect size even at the .10 level of alpha. The power is adequate (.86) to detect a large effect size, however (Cohen 1977).

Simultaneous t-tests were used for each dependent variable to compare the mean of Condition 2 with the means of Conditions 1 and 3 to determine whether knowledgeable younger children respond more like those children similar in age (Condition 1) or similar in knowledge (Condition 3). For the first ad, knowledge significantly increased the total number of counterarguments and the number of relevant support arguments in the predicted direction among the younger children (i.e., Conditions 1 and 2). This indicates the value of product knowledge for generation of these types of responses, even in the absence of increased age (and associated levels of strategic knowledge and cognitive development). Knowledge also resulted in a significantly greater number of inaccurate support arguments in the group, contrary to the direction of the hypothesis.

Age was related to the total number of support arguments and to the total number of elaborations among the knowledgeable children (i.e., Conditions 2 and 3). It appears that age increases these types of responses

independent of product knowledge (which was equivalent between groups) and involvement and verbosity (which were statistically controlled). The remaining dependent variable, number of relevant counterarguments, was not significantly affected by either age or knowledge.

For the second ad, knowledge did not significantly affect any of the cognitive response variables among the younger children although all but one of the mean-differences was in the same direction as the first ad. Age was associated with a significantly greater number of elaborations, a greater number of counterarguments, and, more specifically, a greater number of relevant counterarguments. These differences were observed while product knowledge, involvement, and verbosity were constant. The effect for support arguments, which was significant for the first ad, was in the same direction for the second ad, but not significant at the .10 level. Neither knowledge nor age were significantly related to the number of relevant support arguments or the number of inaccurate support arguments. The Table summarizes the results for both ads.

TABLE
COMPARISONS OF MEAN FREQUENCIES
OF RESPONSE TYPES*

Dependent Variable	Ad 1 Cell Means		Ad 2 Cell Means	
	Cell 1	Cell 2	Cell 1	Cell 2
	Cell 2	Cell 3	Cell 2	Cell 3
Relevant	0.00	.23	.27	.46
Counter	.23	.21	.46	1.21
Arguments	p=.127	p=.422	p=.341	p=.048
All	0.00	.38	.64	.46
Counter	.38	.64	.46	1.43
Arguments	p=.060	p=.170	p=.482	p=.064
Inaccurate	0.00	.38	0.00	.08
Support	.38	.21	.08	.14
Arguments**	p=.017	p=.136	p=.329	p=.665
Relevant	.18	.54	0.00	.15
Support	.54	.50	.15	.29
Arguments	p=.037	p=.251	p=.165	p=.332
All	.73	1.15	.27	.54
Support	1.15	1.71	.54	1.07
Arguments	p=.322	p=.087	p=.242	p=.142
	.73	1.54	.91	1.00
Total	1.54	2.36	1.00	2.50
Elaborations	p=.179	p=.069	p=.297	p=.024

*P-values are from simultaneous one-tailed t-tests and are calculated after controlling for verbosity and involvement.

**Significance levels are reported for two-tailed tests, since results are in the reverse direction of hypotheses.

DISCUSSION

Product knowledge significantly increased the number of counterarguments and relevant support arguments that concrete operational stage children generated. However, there was not a significant difference due to the knowledge manipulation on other cognitive response variables for this ad, nor on any cognitive response variables for the second ad. As noted earlier, the small sample size resulted in insufficient power to detect a medium effect size, which might account for the paucity of significant effects. Further more, reliability of the coding was not estimated, and may have contributed to the lack of significance.

Significant age effects were noted for four of the six dependent variables, but not consistently over both

ads. This finding clearly indicates, however, that product knowledge cannot explain these age-related differences in cognitive processing (since knowledge was equal in both age groups). While Chi (1978) provided evidence that content knowledge may be responsible for age-related differences in children's information processing, she only examined the process of recall. The elaboration procedure under investigation in this study is probably a more complex process than that for recall. Thus, the insufficiency of content knowledge to account for age-related differences may be due to a lack of strategic knowledge among children in this age group (8-9). These results can be interpreted in terms of Roedder's (1981) framework, which labels children in this age group as cued processors. Children in this category have strategic knowledge, but do not use it unless cued. It may be that product knowledge may only be activated for use in processing advertising messages by children in this age group when the children are cued, or reminded of the elaboration strategy. Future studies on the effects of product knowledge should examine strategic knowledge as well as complexity of the processing tasks.

The question of children's defenses against advertising has focused mainly on the production of counterarguments (Brucks, Goldberg, and Armstrong 1986). However, the surprising finding in this study that knowledge increased the number of inaccurate support arguments suggests their relevance to the issue as well. This finding indicates that the strategic knowledge of these children may be at a level of complexity such that they can recall related information, but do not go a step further and use it to evaluate incoming information. The children may have recalled that fork standers and other attributes were interesting and important and generated support arguments accordingly.

Conclusions and Directions for Future Research

Product knowledge appears to provide an incomplete explanation of age differences in cognitive responses to print advertising. Older children who were equivalent in product knowledge to younger children produced significantly more cognitive responses of several types, controlling for verbosity and level of involvement. It is suggested that one direction for future research is to determine the relative contributions of (and interactions among) product knowledge, advertising knowledge, strategic knowledge related to the process of generating elaborative responses to persuasive messages, stage of cognitive development, and physiological maturity in explaining age effects.

This study did find that increasing product knowledge among 8-9 year old children did significantly increase some types of cognitive responses to the first ad, despite their presumed lack of cognitive development and strategic knowledge. Thus, a second direction for future research is to examine the necessary and/or sufficient conditions for children to use product knowledge in generating cognitive responses.

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THE EFFECTS OF QUESTION FORM AND FORMAT ON CHILDREN'S RESPONSES
TO TELEVISION ADVERTISING

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Abstract

Marketing researchers have displayed an increased interest in the psychometric properties of measures of marketing constructs. The central argument of this paper is that psychometric assessment is also important in the design of objective-type questions used in experiments. The current study focused on preschoolers (n = 75) as the test subjects. Results from an experiment manipulating question form, response order, and question wording illustrated that lessons on questioning from the survey literature are applicable to more specific tests of performance.

Introduction

Although researchers on the effects of television advertising have been cognizant of the importance of measurement (Chestnut 1979; Goldberg and Gorn 1983), scant empirical work exists on the consequences of questioning. A notable exception is the work on Rossiter's (1977) short, Likert-type scale measuring children's attitudes toward television advertising (Rossiter 1977; Bearden, Teel, and Wright 1979; Giudicatti and Stening 1980; Riecken and Samli 1981; Macklin 1984). While the scale evidenced consistent reliabilities in terms of test-retest and internal consistency, factor analyses suggested non-uniform dimensions. However, this research stream certainly suggested that children's attitudes in a marketing context could be effectively measured.

The Rossiter scale consisted of Q-type questions. Direct assessment of T-type questions is minimal. Q-type questions are self-reports in response to questionnaires, whereas, T-type ones are objective measures of performance on specific tasks (Cattell 1946, 1957). Recent work on nonverbal assessment is notable, however. Various researchers have illustrated the use of nonverbal response measures to gauge children's understanding of commercial intent (Donohue, Henke, Donohue 1980; Gaines and Esserman 1981; Zuckerman and Gianinno 1981; Stutts, Vance, and Hudleson 1981; Macklin 1983). While such measures seem more age-appropriate for young children with limited linguistic skills (Brown 1972, 1973, 1975), their use is likewise subject to measurement scrutiny. Macklin (1985) presented evidence that an increase in the number of response alternatives resulted in a much less competent view of children's understanding of selling intent. It was argued that Donohue, Henke, and Donohue's (1980) assertion that preschoolers understand commercial intent may have been premature in that the number and kind of nonverbal alternatives need examination.

Indirect evidence for the importance of questioning can be further gleaned from the children's literature. For example, in direct, oral interviews, Ward, Wackman, and Wartella (1977) asked grade-K children, "what is a commercial?" and reported 10% as articulating commercial intent. When they posed, "what do commercials try to do?" the percentage increased to 22% successful. Wartella (1980) reported that the percentage rose to 62% when the kindergartners were asked, "what does this commercial for (product X) want you to do? Wording made quite a difference on the successful outcomes! From these examples, it can be seen that measurement is, as we would expect, an important facet in determining what we conclude about the child's attitude and understanding about television commercials. This paper contains a description of a

study specifically designed to address issues of measurement with T-type questions.

The Importance of T-Data

Cattell (1946, 1957) provided a basic, but useful approach to psychological assessment. He suggested three types of data. First, questionnaire or Q-data allows us to make inferences from a person's self-descriptions of self-reports. As researchers, we simply ask people questions about themselves. Second, we can observe people's behavior in naturalistic settings. Cattell called the results stemming from everyday life setting L-data or life record. Third, T-data or objective tests measure performance on specific tasks of interest to the researcher. The current research will focus on this last type of measure which is especially important to researchers interested in the effects of marketing stimuli on people. Because we typically employ experimental designs with objective-type questions, concern for T-data is appropriate.

Cattell (1957, 1958) defined objective tests as one in which subjects are told what they should try to do; however, the consequences of the performance are not interpreted in terms relevant to the individual. Therefore, while the subject implicitly or explicitly believes he/she should answer correctly, the correctness of the assessment is not divulged by the experimenter.

What distinguishes an objective test from a questionnaire or Q-data is the nature of the response elicited. T-data require prescribed behavior or performance, while Q-data involve self-descriptions or self-evaluations. However, questioning and scoring are essentially the same. As such, both Q- and T- data are subject to distortion that Campbell and Fiske (1959) referred to as "method variance." Cattell (1968, 1977) identified two major types of measurement distortion: 1) instrument effects and 2) observer effects. Q- and T-type questions are prone to the former contamination because the instruments themselves influence the subjects directly. Instrumentation can be especially important when dealing with youthful subjects who are functionally illiterate. Brown (1972, 1973, 1975) convincingly indicated that young children may have problems in orally articulating what they know.

Messick (1983) succinctly described instrument effects as being special instances of context effects. Cattell (1977) equated them to response consistencies derived from interactions of personal characteristics of the subject with the form or format of the assessment device and the conditions of administration. An example of test-form effect is differential familiarity with response formats. A sentence-completion task may seem very unfamiliar to the 4 year-old versus the average 10 year-old. Numerous other administrative-based differences can result due to such factors as lighting, noise, and so forth. The current research, yet to be described, attempted to hold these latter effects constant, while the former, form and format, were systematically manipulated.

The next section of this paper will contain discussion of research in marketing on the form and format of questions. All empirical evidence stems from Q-type studies. As discussed, these types of measures are equally subject to biases stemming from instrumentation. Although the current study focuses on

a T-type task (i.e., an objective test), the survey literature based on adult subjects in a marketing context serves as an excellent basis from which to proceed in an examination of instrumentation effects on children.

Form and Format of Questions

Perhaps the most important event affecting the increased interest by marketers in measurement was the "Special Section on Measurement" in the February 1979 Journal of Marketing Research. Indeed, Churchill and Peter (1984) reported more attention paid to construct validation since that special issue than in the entire period preceding it. Churchill and Peter (1984) used meta-analysis to investigate three sets of independent variables: sampling characteristics, measure characteristics, and measure development processes. They reported that the measure characteristics had a major influence on obtained reliability estimates, as one would anticipate from psychometric theory. The similarity of content, structure, and wording of items were found to impact reliability estimates.

Peter and Churchill (1986) recently reported additional work with the meta-analysis approach based on the 162 measures they found in the marketing literature. Once again, they reaffirmed the importance of instrumentation. Measure characteristics were positively related to reliability evidence with reliability affecting validity estimates. Besides the importance of instrumentation for reliability, however, these researchers argued that measure characteristics are also important for content validity, which is usually a non-empirical judgment.

Empirical efforts on survey questionnaires have traditionally centered on rating scale differences such as polarity, response intervals, and physical format (for review, see e.g., Beltramini 1982). Three recent marketing studies that provide specific implications to the research at hand will be briefly reviewed, although the current study will be framed from Schuman and Presser's (1981) approach.

Blunch (1984) dispelled the wisdom of conventional techniques to eliminate position bias (i.e., the position of the answer in relation to the other alternatives). He indicated that position bias is not necessarily disclosed by rotation, and it is often more important than sampling error. Blunch offered some solutions to handle the problem including the use of cardboard wheels so that alternatives are shown as "spokes."

Second, Mayer and Piper (1982) provided empirical support for the importance of question form and format in self-administered surveys. A change in one question's wording and alternative responses provided vastly different estimates of brand ownership. One version caused respondents to check the wrong box. Had the ineffective question been asked alone, then misleading results would have been accepted as reflecting truth.

Third, Hunt, Sparkman, and Wilcox (1982) examined the role of pretests to detect problems in survey research. While helpful, pretests were not found to be a panacea. Specifically, Hunt, Sparkman, and Wilcox (1982) reported that respondent verbalizations were not necessarily effective in identifying all types of faulty questions. Their work suggested that even adults cannot be expected to detect and/or vocalize faulty wordings, structures, or forms.

The importance of question form and format has received even greater attention by those in other behavioral fields incorporating survey work (such as psychology, sociology, political science). Payne's (1951) work

stands as a classic on the importance of (and pitfalls in) wording questions.

Certainly in the past decade or so, researchers have taken another look at the importance of questioning on subsequent answering. Sudman and Bradburn (1982) stressed the importance and difficulty in asking simple questions to obtain reliable answers. Rich with practical guidance, Sudman and Bradburn's work points out that, while research with survey or Q-type questions is extensive, formal research on knowledge questions (T-type) is more scant (Sudman and Bradburn 1982, p. 117).

A recent, comprehensive work on questioning was presented by Schuman and Presser (1981). They reported results from 200 experiments conducted within 34 national surveys. In a careful analysis, the researchers systematically approached question effects. They finely argued many aspects of question form, wording, and context. The current research will build on four of their specific concerns: 1) open-versus-closed-forms of questions, 2) the addition of a "don't know" category, 3) the listing of alternatives, and 4) the tone of the wording. Fuller descriptions of these categories will be offered with the development of specific hypotheses for the current research.

Current Study

General Description

A study was conducted to explore the importance of question form, response order, and tone of wording on children's performance. The test was an objective or T-type task. Children were asked to respond to a short series of questions about their understanding of visual information presented in a rough commercial, i.e., an animatic. The questions were asked at the end of a larger study, to be reported elsewhere, focusing on the role of music in children's advertising. Children were randomly assigned to one of three conditions which prescribed the types and forms of questions posed.

Hypotheses

Four hypotheses were formulated based on the work of Schuman and Presser (1981). Two hypotheses were stated about question form. First, greater success was predicted from children who responded to fixed alternatives of a closed question as to those responding to the open form of the question (H1). Schuman and Presser (1981, p. 107) reported that every comparison revealed statistically significant differences in the marginal distributions of responses between open and closed forms with adult subjects. Second, it was hypothesized that an addition of a "don't know" category to the closed form would lower the success rate because more children would gravitate towards it, given a difficult question. In survey research, Schuman and Presser (1981) encouraged the inclusion of "don't know" for attitudinal measures because, they argued, it not only reflects a legitimate answer, but it also results in differences to other attitudinal variables.

The third hypothesis (H3) focused on the order of the response alternatives. Correct responses were predicted to increase when the correct item was placed in the last position. Survey work (Schuman and Presser 1981, p. 66) suggested that the last-listed of 2 to 3 alternatives gained approximately 15% from its placement alone.

Fourth, it was hypothesized (H4) that word usage more congruent (i.e., blatantly slanted) with a correct item would result in higher success. Although the specific wording will be described shortly, it was recognized

that the effects of question wording are difficult to predict at least in Q-type questions (Schuman and Presser 1981, p. 296).

Measures

Three conditions (a, b, c) were developed for each of the three areas of inquiry: 1) question form (H1 and H2), 2) response order (H3), and 3) wording (H4). Specific questions for the measurement areas will now be described.

1) Question Form

"At the end of the commercial, they showed us some food on the table besides PopPops (the advertised cereal)...."

Condition a. What was on the table?

Condition b. Did they show us?
(Vertical, pictorial answer board illustrating:)

Toast, french fries, donut

Toast, donut, juice

*Toast, milk, juice

Condition c. Same as b above with a (?) addition to which the experimenter articulated "don't know."

?

2) Response Alternative Order

"When you watched TV, what animal was shown with PopPops? What was he supposed to be?"

Condition a. (Pictorials of *rabbit, lion, bear, and monkey in circular display)

Condition b. Bear

 Lion

 Monkey

* Rabbit

Condition c. Bear

* Rabbit

 Lion

 Monkey

3) Question Wording

At the very beginning of the commercial, before the animal joined the boy and girl for breakfast, what did the animal _____

Condition a. "pop-out of?"

Condition b. "come out of?"

Condition c. what was the animal shot out of?

(identical response alternatives;
sketches of the following:)

cannon* top hat house/cottage

Note * correct answer

The child's answers were recorded on an answer sheet visible to the child. He/she was not provided feedback as to the correctness of the responses. Children simply had to point to a picture to relay their answer, of course with the exception of children who were asked the free recall question (Condition a, question #1).

Subjects

A director of a preschool in a suburb of a Midwestern city agreed to the pupils' participation (n = 75). The 40 boys and 35 girls were white and mostly aged 4 (a few children were almost 4 and others had recently turned 5). They came from homes that could best be described as suburban, middle-to upper-middle class. All parents granted written consent.

Procedures

Each child was interviewed on an individual basis in a room (the director's office) located apart from the classrooms. A teacher directed the child to the room where he/she was greeted and asked to watch a commercial. The commercial was a "rough" or an animatic. Three versions were administered randomly with the audio portion being different in terms of the music (jingle, background, or absence). All video portions were identical with a series of storyboards taped depicting a rabbit promoting a fictitious cereal. Equal numbers of children from these three main treatments were then arbitrarily assigned to one of three conditions herein reported. Condition a consisted of the following: 1) an open-ended question about what was shown on the table, 2) a circular portrayal of four alternatives of what animal the product spokesperson represented and 3) a question asking from what did the animal pop-out of. Condition b consisted of these three questions: 1) a closed form consisting of three of alternative offerings of food on the table, 2) the type of animal used as the product spokesperson pictorially positioned in the last, vertical alternative spot, and 3) the question asking what the animal came out of. Condition c was composed of the following: 1) the closed version of the question of food was depicted on the table, with the addition of a "don't know" category, 2) the correct animal depicted in a middle (second) alternative spot, and 3) the question asking what the animal was shot out of.

The reader will notice three facets about these procedures. First, these questions centered only on visual information which was identical on all versions. Second, equal numbers of those in the different audio groups were placed in these visual treatments. Third, the predicted successes from the manipulations (directions of hypothesized successes) were balanced across the groups a priori. Therefore, these procedures assured comparisons of visual effects due to question form, ordering of responses, and wording.

Results

A child's sex had no statistical effect on the results; thus, this variable was eliminated from subsequent analysis. The results indicated statistical support for three out of the four hypotheses. The third hypothesis, predicting the last alternative would be selected at a more successful rate, was not supported.

H1 was statistically supported because the crosstabulation between type of question (open or closed) was related with the percentage successful ($X^2 = 14.97$, $df = 1$, $p = .0001$). The result will come as no surprise to those familiar with measurement with children. Young children do not appear to be able and/or willing to freely articulate answers, yet over one-half recognized the correct information illustrated by three fixed alternatives.

This finding against likely success with open-ended questioning is consistent with Brown's (1972, 1973, 1975) work in developmental psychology. Moreover, Chestnut (1979) pointed out the potential flaw of advertising studies that inappropriately include the verbal response method with young children.

Support was also indicated for the importance of a "don't know" category. Table 1 indicates that 36% of the children who were offered this response alternative selected it. As predicted, success was not as great as compared to those who were offered three, fixed response alternatives (X^2 corrected = 4.25, $df = 1$, $sign. = .039$). Thus, a "don't know" category may provide a more comfortable or easy answer for those children who are uncertain. Alternatively, "don't know" may have been a recency effect due to its last place. H3 results would not lend support to this explanation, however.

TABLE 1

Response	QUESTION FORM		
	a	b	c
Correct: toast, milk, juice	-	13 (52%)	5 (20%)
Toast, ff, juice	-	6 (24%)	4 (16%)
Toast, donut, juice	-	3 (12%)	6 (24%)
Incomplete response	1 (4%)	0	0
Don't know	0	2 (8%)	9 (36%)
Silence, no response	24 (96%)	1 (4%)	1 (4%)
	25 (100%)	25 (100%)	25 (100%)

The third hypothesis was the only one that did not receive statistical support. (See Table 2). Position made no difference in the children's knowledge that the "hip" character in the commercial was supposed to look like a rabbit (Correct/Incorrect $X^2 = .77$, $df = 1$, $ns.$).

TABLE 2

Response	RESPONSE ORDER		
	a	b	c
Correct: Rabbit	10 (40%)	9 (36%)	12 (48%)
Bear	7 (28%)	9 (36%)	7 (28%)
Lion	6 (24%)	3 (12%)	2 (8%)
Monkey	1 (4%)	3 (12%)	3 (12%)
Don't know	1 (4%)	-	1 (4%)
Silence, no response	-	1 (4%)	-
	25 (100%)	25 (100%)	25 (100%)

Finally, H4 received support. Wording does create a difference! Table 3 suggests that leading or slanted words can increase the percentage of children who are correct. An animal would not be "shot out of" a hat or house, but preschoolers know a cannon is more plausible. The crosstabulation between those correct/incorrect children was statistically significant ($X^2 = 9.92$, $df = 2$, $sign. = 0.007$).

TABLE 3

Response	QUESTION WORDING		
	a	b	c
Correct: Cannon	7 (28%)	8 (32%)	17 (68%)
Hat	11 (44%)	12 (48%)	4 (16%)
House	7 (28%)	4 (16%)	4 (16%)
Don't Know	-	1 (4%)	-
	25 (100%)	25 (100%)	25 (100%)

Summary

The current research reaffirms concern for issues of measurement. Three out of four hypotheses were supported: form, open v. closed; form, "don't know;" and wording. A position bias of alternatives was not indicated (H3). The study was unique in two regards: 1) the subject population consisted of preschoolers and 2) the questions were T-type or objective in nature. While the hypotheses were developed from the literature based on survey data, the applicability of concern to objective-type data was argued and, then, empirically supported.

Several implications can be drawn from the current results. First, nonverbal response methods appear to be more age-appropriate with young audiences (H1 supported). However, instrument biases, inherent in all types of questioning cannot be dismissed with the use of pictures, props, or other nonverbal techniques. The current results indicated that researchers working with children must attend to the psychometric properties of the measures that they use to judge performance. While pretesting measures, replicating results, employing alternative methods, and so forth, may assist in the assessment of measurement properties, researchers must be prepared to improve continually and replace measures. Accurate and valid measurement is a never-ending process—a statement with which researchers working with adult subjects can well agree.

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Abstract

Four experimental approaches to the study of subliminal perception are summarized and evaluated. It is concluded a) that evidence favoring subliminal perception is only obtained when subliminal or unconscious perception is defined in terms of subjective criteria, and b) that an approach based on subjective criteria can provide a basis for establishing the critical differences that distinguish conscious from unconscious perceptual processes.

Introduction

The concept of subliminal perception has generated considerable debate for many years. However, despite numerous studies directed at establishing whether or not unconscious perceptual processes provide sufficient information to influence higher-level decision processes (see Dixon 1971, 1981; Holender 1986 for extensive reviews), there are still no generally-accepted answers. Much of this continuing controversy is centered on questions concerning how perceptual awareness is best defined and measured. In fact, an answer to the question, "Does subliminal perception occur?", depends entirely on both a) how "subliminal" or the threshold for perceptual awareness is defined and b) the adequacy of the procedures used to measure this threshold. In this paper, three major experimental approaches that have been followed at various times to study subliminal perception are summarized. Each approach, considered by itself, has critical weaknesses. For this reason, a fourth approach, based on recent empirical work (e.g., Cheesman and Merikle 1985), is described. This fourth approach not only resolves many of the controversies that have plagued investigations of subliminal perception but it also provides a basis for establishing the critical differences that may distinguish conscious from unconscious perceptual processes.

Prior to considering the different experimental approaches, it is important to define exactly what psychologists mean by awareness or conscious perceptual processing. Awareness is typically measured in terms of an observer's reports concerning his/her perceptual experiences. This approach simply reflects an attempt to operationalize the phenomenal experiences that we all have when our sense organs are stimulated. Typically, stimulation of the sense organs leads to phenomenal perceptual experiences that can be described in some detail. On the other hand, when stimulation of sense organs does not lead to phenomenal perceptual experiences, no descriptions are possible. Thus, definitions of awareness are typically tied to some type of verbal response made following stimulation of the sense organs. The controversies have concerned both the exact type of response that is the most accurate indicator of perceptual awareness and the most appropriate way the particular response that is considered to reflect awareness should be measured.

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Studies Based on Claimed Awareness

Historically, in the earliest studies directed at establishing the possible efficacy of unconscious perceptual processes in determining behavior, a definition of awareness was adopted that was based solely on an observer's subjective confidence that the perceived stimulus information was useful for the required task. Many of these studies have been reviewed by Adams (1957), and only one representative study will be discussed. A very early study was reported by Sidis (1898) who had observers guess the specific letter or numeral printed on cards that were displayed so far away from the observers that they had no confidence they were doing anything other than guessing. Sidis found that the observers' "guesses" were correct considerably more often than would be expected on the basis of pure random guessing and therefore concluded that the results indicated "... the presence within us of a secondary wakening self that perceives things which the primary waking self is unable to get at" (p. 171). Similar findings have been reported by many other investigators (e.g., Miller 1939; Stroh, Shaw and Washburn 1908; Williams 1938), and thus there is every reason to believe that this is a relatively robust, easily replicable phenomenon.

If one accepts the assumption that a good definition of conscious perceptual processing can be based solely on observers' reports concerning how confident they are that useful perceptual information has been perceived, then the results obtained in these studies provide definitive evidence for the existence of subliminal perception. However, most psychologists do not accept these results as providing any sort of definitive support for the reality of subliminal perception. A major weakness with this type of study is that it is impossible to establish exactly what criteria observers are using to decide that they are guessing (cf., Merikle 1984). More generally, with this type of approach, it is impossible to determine if observers' reports indicating no subjective confidence are based on preconceived biases or on a true absence of phenomenal perceptual information. It is for this reason that most researchers, with a few notable exceptions (e.g., Dixon 1981, Henley 1984), reject any approach to the study of subliminal perception in which unconscious perception is simply equated with observers' reports indicating a lack of subjective confidence.

Studies Based on Incorrect Identification Responses

Another approach to the study of subliminal perception has based the definition of unconscious perception upon a classification of observers' responses in a difficult visual identification task. With this approach, it is assumed that correct identification of a visual stimulus indicates conscious perception and that incorrect identification indicates a lack of awareness for the stimulus. In one of the classic studies in which this approach was followed (Lazarus and McCleary, 1951), ten nonsense syllables were presented to observers and presentation of five of these syllables was paired with the presentation of electric shock. Following this initial conditioning, the ten nonsense syllables were presented tachistoscopically under conditions that made it difficult for the observers to identify the syllables correctly. Two different responses were measured during this phase of the experiment: a) identification accuracy and b) galvanic skin response (GSR). When the observers' identification responses were classified on the basis of whether they were correct or incorrect, Lazarus and McCleary found that the GSR responses were greater in magnitude following the presentation of syllables previously paired with shock, independent of whether or not these syllables had been

correctly identified. Lazarus and McCleary assumed that the GSR, being mediated by the autonomic nervous system, was sensitive to both conscious and unconscious perceptual processes. Therefore, they concluded that subliminal perception, defined as perception below the threshold for identification, had been demonstrated.

The publication of Lazarus and McCleary's findings led to considerable debate that sharpened a number of important methodological issues. Eriksen's (1960) critique is particularly important. He questioned the validity of Lazarus and McCleary's conclusions by noting that the partial correlation between the two responses used to indicate perceptual processing (i.e., identification and GSR) may have occurred because the responses were not equally sensitive to conscious, phenomenal, perceptual information. According to Eriksen, the GSR response, being a continuous variable, may be a more sensitive indicator of perceptual experience than the dichotomous identification measure (i.e., correct vs. incorrect). A differential sensitivity would lead to a partial correlation between measures and would account for the apparent dissociation between measures observed in the Lazarus and McCleary study without recourse to the concept of subliminal perception. Furthermore, it is reasonable to expect that any difference in sensitivity between measures would be maximized when stimuli are barely visible, as they are in any study of subliminal perception.

A particularly important consideration that provides support for Eriksen's criticisms comes from an examination of the overall identification performance in the Lazarus and McCleary study. When identification accuracy was averaged across all ten nonsense syllables, it was found that all observers identified considerably more syllables than would be expected on the basis of chance guessing. Thus, overall identification performance was not at a chance level, which is the usual definition of a detection or identification threshold, and therefore, by definition, it must be concluded that the observers in the Lazarus and McCleary study were aware of the stimulus information. On the basis of such considerations, Eriksen reached the conclusion in 1960 that verbal reports are as sensitive an indicator of perception as any other response that has been studied (e.g., GSR). Given that verbal reports are assumed to indicate conscious perceptual experience, then before subliminal perception is demonstrated, it must be shown perceptual processing occurs in the absence of correlated verbal reports.

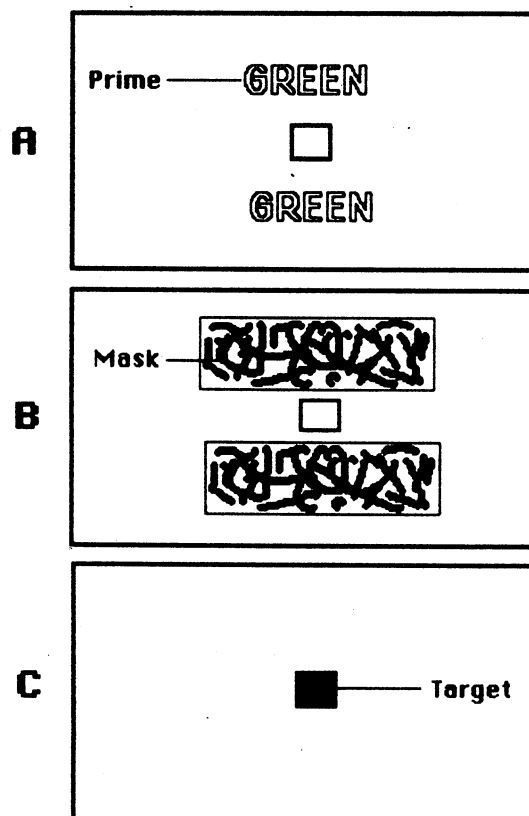
Studies Based on Visual Masking

Eriksen's (1960) conclusions concerning the validity of subliminal perception were not seriously challenged until 1974 when Marcel reported an extensive series of experiments which appeared to demonstrate that visual stimuli are perceived even when observers cannot detect their presence. Marcel's (1983a) experiments were based on a well-documented phenomenon indicating that decision times to visual target stimuli can be either facilitated or inhibited by the presentation of a related stimulus (i.e., a "prime" in psychological jargon) immediately before the onset of a target (e.g., Dyer and Severance 1973; Meyer, Schvaneveldt and Ruddy 1975). The striking result found by Marcel was that decision times to targets were greatly influenced by primes even when the visibility of the primes was degraded to such an extent by backward masking that they were impossible to detect, as indicated by the observers' verbal reports. In fact, the magnitude of the effect produced by masked primes was approximately the same size as the magnitude of the effect produced when the primes were clearly visible. In subsequent experiments, other investigators, employing similar methodologies, have also obtained results comparable to those originally reported by Marcel (e.g., Balota 1983; Fowler et al. 1981; McCauley et al. 1980). Thus, if verbal reports are assumed to indicate perceptual awareness, the results of these studies appear to provide definitive evidence that stimuli may be perceived without awareness.

Given the potential significance of the results from these studies involving masked primes, it is important to consider the general methodology in some detail. The procedures followed in a comparable experiment reported by Cheesman and Merikle (1984) will serve for purposes of illustration. In this experiment, a variant of the Stroop (1935) color-word interference task was used, and the task for the observers was to name a color (i.e., the target) that was immediately preceded by either a congruent or an incongruent color word (i.e., the prime). Previous research using comparable displays has indicated that the reaction time to name a target color is increased when it is preceded by an incongruent color word (e.g., Dyer and Severance 1973) and is decreased when it is preceded by a congruent color word (e.g., Dalrymple-Alford 1972). The general characteristics of the stimulus displays are illustrated in Figure 1. The important points to note are that a) the color words which served as primes were always presented prior to the centrally-located target colors, b) the presentation of each color word was followed by the presentation of a masking stimulus, and c) each color word was either congruent or incongruent with the name of the target color. The critical aspect of the methodology is that the temporal interval between the prime and the masking stimulus was either sufficiently long to permit identification of the primes or so short that the observers could not distinguish among the four different primes that were used.

FIGURE 1

EXAMPLES OF STIMULUS DISPLAYS

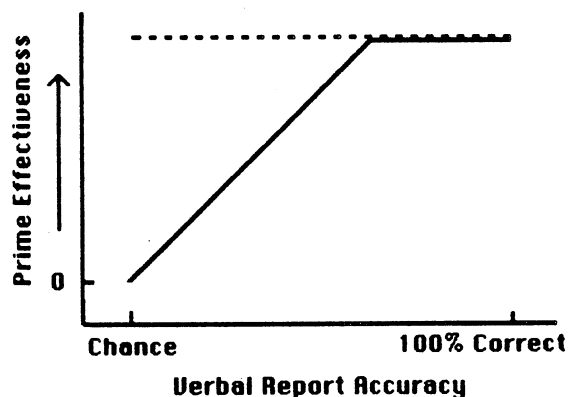


The general pattern of results found in a number of studies in which a methodology similar to the one described above has been used is illustrated by the dotted line in Figure 2. The critical aspect of these results is that prime effectiveness appears to be completely independent of verbal report accuracy. In other words, in these studies, detection or identification of the primes, as indicated by verbal report accuracy, had no relation to how effective the primes were at influencing decision

times to the targets (e.g., Balota 1983; Fowler et al. 1981; Marcel 1983a; McCauley et al. 1980). Furthermore, even when the primes were neither detected nor identified, they were perceived since, as indicated in the Figure, they were still capable of influencing target decision times. Given the assumption that above chance verbal report accuracy indicates awareness and that chance level verbal report accuracy indicates a lack of awareness, findings such as those illustrated by the dotted line in Figure 2 provide strong, compelling evidence for the validity of subliminal perception.

FIGURE 2

ILLUSTRATION OF TWO PATTERNS OF RESULTS



Unfortunately, the pattern of results illustrated by the dotted line in Figure 2 has not been found in all studies directed at assessing the effectiveness of masked primes. In other studies, the pattern of results has been much more similar to the one illustrated by the solid line in the Figure (e.g., Cheesman and Merikle 1984, in press). This alternative pattern of results is theoretically very boring, as it shows that verbal report accuracy and prime effectiveness are perfectly correlated. More importantly, these alternative results also indicate that primes are completely ineffective when verbal report accuracy is at a chance level of accuracy. Thus, the results illustrated by the solid line in Figure 2 provide no evidence whatsoever indicating that primes are perceived without awareness. In fact, these results are completely consistent with Eriksen's (1960) earlier conclusion suggesting that verbal reports are as sensitive an indicator of perception as any other response that has been studied.

Previously, we have suggested that the apparent conflict between the two patterns of results illustrated in Figure 2 can be resolved by considering the procedures used to establish awareness thresholds in the different studies (Cheesman and Merikle 1985, in press). In the studies in which results similar to those illustrated by the dotted line in the Figure were obtained, awareness thresholds were determined on the basis of very few observations. Therefore, it is very probable that the threshold or boundary separating chance from above chance verbal report accuracy was not measured reliably (cf., Merikle 1982). On the other hand, in the studies in which results similar to those illustrated by the solid line in the Figure were obtained, awareness thresholds were based on a considerably greater number of observations. Thus, it is much more likely that the thresholds in these latter studies were measured reliably. This consideration of the procedures used to determine awareness thresholds suggests that the thresholds established in the studies which appear to demonstrate subliminal perception may have been more indicative of the observers' claimed awareness than of the observers' actual ability to indicate verbally when a stimulus was detected or identified (e.g., Cheesman and Merikle 1985, in press). If this conjecture is correct, then it is entirely possible that the two different patterns of results found in studies involving masked

primes are not necessarily contradictory.

However, if thresholds for claimed awareness rather than thresholds for detection or identification were established in the studies that appear to indicate that prime effectiveness is independent of verbal report accuracy, then the results of these studies do not necessarily provide evidence favoring subliminal perception. A central assumption underlying these studies was that perceptual awareness is best defined in terms of an observer's ability to give verbal reports concerning stimuli at a better than chance level of accuracy. Since it is unlikely that the procedures used in these studies ensured that this assumption was satisfied, the results of these studies cannot be considered definitive. On the other hand, the results of these studies involving masked primes are entirely consistent with earlier studies of subliminal perception in which it was established that considerable perceptual processing occurs even when observers claim to be unaware of the stimulus information (e.g., Miller 1939; Sidis 1898; Williams 1938).

Studies Based on Subjective Thresholds and Qualitative Differences

Recently, we have proposed an approach to the study of subliminal perception which has the potential to resolve many of the long-standing controversies that have continually plagued this area of research. The proposed approach is similar in some ways to the approach underlying the studies involving an assessment of the effectiveness of masked primes. However, there are two critically important differences. First, the boundary between conscious and unconscious perceptual processes is equated explicitly with a subjectively-defined threshold based on claimed awareness rather than an objectively-defined threshold based on chance level verbal report accuracy. Second, subliminal perception is only assumed to be demonstrated when it can also be shown that consciously and unconsciously perceived information lead to qualitatively different behavioral consequences.

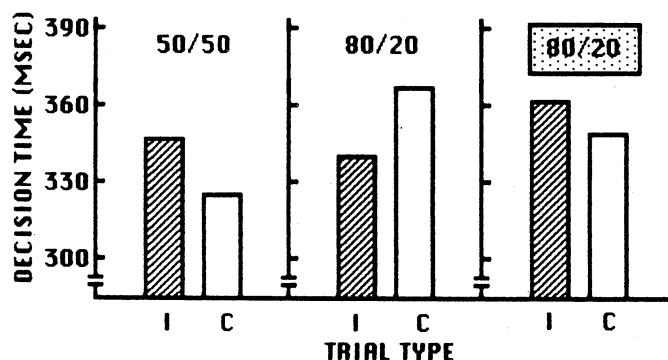
The proposed approach shares characteristics with several previous approaches. Obviously, by defining the boundary between conscious and unconscious perceptual processes in terms of subjective criteria, the proposed approach shares certain important similarities with all earlier studies of subliminal perception in which awareness was measured in terms of observers' subjective confidence that useful stimulus information was perceived. However, the previously mentioned criticisms of approaches based on subjective measures of awareness are avoided in the proposed approach by the additional requirement that any demonstration of subliminal perception also requires evidence indicating qualitative differences in the effects of consciously and unconsciously perceived information. Although the importance of demonstrating qualitative differences between the effects of consciously and unconsciously perceived information has been emphasized previously (e.g., Dixon 1971, 1981; Shevrin and Dickman 1980), this criterion has had surprisingly little empirical impact. In contrast, demonstrations of qualitative differences play a central role in the proposed approach, as they provide the critical evidence for distinguishing between conscious and unconscious processes. The reason that demonstrations of qualitative differences are so important is that they provide much stronger support for any distinction between conscious and unconscious processes than can ever be provided solely by demonstrating that stimulus information is perceived both above and below a particular threshold.

The proposed approach can be illustrated by a recent study we have conducted involving another variant of the Stroop color-word interference task. In this study, the target colors were either red or green and the color words used as primes were also either "red" or "green". In this two-color variant of the Stroop task, observers can name a target color faster when it is preceded by the congruent color word than when it is preceded by the incongruent color word, as long as congruent and incongruent trials

are equally probable (i.e., 50/50). However, if the probabilities are changed so that incongruent prime-target pairings occur on 80% of the trials and congruent pairings occur on 20% of the trials (i.e., 80/20), then observers name a color faster when it is preceded by the incongruent color word than when it is preceded by the congruent color word (cf., Logan, Zbrodoff and Williamson, 1984). The different patterns of results obtained under these two probability conditions are illustrated in the left and center panels of Figure 3. A comparison of the panels shows that it is possible to completely reverse the relative effects of congruent and incongruent primes simply by varying the proportion of congruent and incongruent prime-target pairings.

FIGURE 3

STROOP EFFECTS WITH DIFFERENT PROPORTIONS OF CONGRUENT AND INCONGRUENT PRIME-TARGET PAIRINGS



Probability effects, such as the one described above, are generally assumed to indicate that observers voluntarily adopt a strategy on any particular task to maximize performance. Thus, it is reasonable to assume that the observers in the above task adopted a strategy in the 80/20 probability condition which utilized the predictive information provided by the primes. Since only two colors were used and incongruent prime-target pairings occurred on 80% of the trials, the best prediction that could be made concerning the target on the basis of the identity of the prime was that the target would be the color *not* named by the prime. Such a strategy would have allowed observers to anticipate the target correctly on 80% of the trials and would have only led to incorrect anticipations on 20% of the trials. This strategy provides a straightforward account of the faster decision times observed when incongruent rather than congruent prime-target pairings were presented, as it implies that performance should be facilitated on the large proportion of trials involving incongruent prime-target pairings and disrupted on the small proportion of trials involving congruent pairings.

Given that different predictive strategies can be induced in a Stroop task by variations in the proportions of congruent and incongruent trials, it was possible to use this task to establish that conscious and unconscious perceptual processes lead to qualitatively different behavioral consequences. If it is assumed that one function of consciousness is the selection of appropriate actions based on the analysis of perceptual information, then a reasonable expectation is that predictive strategies based on the identity of a prime may only occur when observers are consciously aware that the prime has been presented. Conversely, when observers have no awareness of a prime having been presented, it should be impossible for them to initiate any predictive strategy that would allow them to anticipate the color of the target. A demonstration that predictive strategies are only initiated when observers are consciously aware of the primes would indicate that conscious and unconscious perceptual processes are qualitatively different and

would therefore support a definition of awareness based on observers' subjective reports.

To test whether the initiation of predictive strategies is limited to conditions in which observers claim to be consciously aware of the primes, the variant of the Stroop task described above was used in conjunction with a visual masking stimulus. In this experiment, the temporal interval between a prime and the mask was either so short that the observers claimed they were unable to discriminate one prime from the other or sufficiently long to allow the observers to identify which prime had been presented. The interesting pattern of results that was obtained is illustrated by comparing the middle and right panels of Figure 3. As in the preceding study, decision times were faster on incongruent than congruent trials when the primes were clearly visible. However, as indicated by the data presented in the right panel of the Figure, when the primes were masked so that the observers claimed not to be aware of their identity, the pattern of results was similar to that found when congruent and incongruent trials were equally probable. Thus, these data indicate that observers cannot initiate predictive strategies based on the identification of the primes when they claim not to be able to discriminate between the primes. However, these data also demonstrate that the primes were perceived even when the observers claimed not to be aware of them, since a typical Stroop effect was observed under these conditions.

These results clearly demonstrate a qualitative difference in the relative effects of congruent and incongruent primes which is dependent upon observers' claims concerning their perceptual awareness. These findings thus support the assumption that the boundary between conscious and unconscious perceptual processes can be defined in terms of observers' statements concerning their awareness of perceptual information. Furthermore, if this assumption is accepted, then these results provide definitive support for subliminal perception. It is important to emphasize, however, that the observers' verbal guesses, if they had been forced to guess in this experiment when they claimed no awareness, would have been considerably better than a chance level of accuracy. Thus, the conditions under which subliminal perception seems to occur are those in which perceptual analysis leads to phenomenal experiences that observers do not believe provide sufficient information to guide their behavior (cf., Marcel 1983b).

Conclusions

This review of the different approaches followed in studies of subliminal perception indicates that evidence favoring subliminal perception is often found when perceptual awareness is defined in terms of subjective criteria. In the very earliest studies of subliminal perception, subjective criteria were used, and it was established that the observers could respond consistently at a better than chance level of accuracy even when they thought that their responses were only guesses (e.g., Miller 1939; Sidis 1898; Williams 1938). Likewise, our studies involving masked primes have consistently shown that primes are effective even when observers claim that they are not perceiving sufficient information to identify which prime may have been presented (Cheesman and Merikle, 1984, 1985, in press). Thus, if perceptual awareness is measured in terms of subjective criteria, then subliminal perception is a valid, easily-demonstrated phenomenon.

On the other hand, some critics of subliminal perception believe that the only appropriate way to define perceptual awareness is in terms of an observer's actual ability to give correct verbal reports indicating detection or identification of stimuli (e.g., Holender 1986). Thus, if observers are forced to guess even when they are certain they are unable to identify or detect a stimulus, and these guesses are somewhat more accurate than a chance level of performance, then these observers, by definition, are perceptually aware of the stimuli. To date, no evidence favoring subliminal perception has been found

when this definition of awareness has been adopted and precautions have been taken to ensure accurate measurement of detection or identification thresholds (cf., Cheesman and Merikle 1985; Merikle 1982).

Previously, we have proposed that this definitional debate can be resolved by demonstrating that consciously and unconsciously perceived information lead to qualitatively different behavioral consequences (e.g., Cheesman and Merikle 1985; Merikle and Cheesman 1986). In fact, it is unlikely that any agreement concerning the proper definition of awareness will ever be reached unless the qualitative differences that distinguish conscious from unconscious perceptual processes are demonstrated. Furthermore, a real advantage of directing research toward establishing qualitative differences in perceptual processing is that the important research question is changed from "Does unconscious perception occur?" to "What are the differences that distinguish conscious and unconscious perceptual process?" The qualitative differences in perceptual processing described above, as well as other reported qualitative differences (e.g., Groeger 1984; Marcel 1980), provide optimism that future studies directed at establishing qualitative differences in perceptual processing will allow further specification of the critical differences that distinguish conscious from unconscious perceptual processes.

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Abstract

Household as Process

This paper reviews some anthropological approaches to the household that are useful in understanding decision making as a social process rather than a sequence of discrete events or stages. These concepts are applied to understanding decisions about investment in housing in two very different cultural contexts: Northern California and Southern Belize (Central America). In both situations investment and consumption decisions are best understood as attempts to reconcile monetary and non-monetary claims to household resources.

Introduction

"...the structure of power in a family is not determined by a single set of external circumstances such as the existence of capitalism, market forces, or male solidarity. Rather, it comes into being through a changing process of negotiation in which the members call upon features of the relationship itself in addition to conditions in the environment. To understand differences between families, we must increase our understanding of negotiation according to non-economic rules of exchange within an environment dominated by economic rules." (Curtis 1986, p. 175)

A number of fields that have focussed their attention on household and family have begun to move in the direction of studying issues of power and inequality within the domestic arena. Researchers in economics (Becker 1981, Folbre 1984), sociology (Curtis 1986, Safiliou-Rothchild 1972), history (Hareven 1982, Segalen 1985), and political economy (Smith et al. 1984), have contributed to a growing awareness of the active role that households play in social and economic change, and their status as an important unit for collective decision making.

The picture of the household that emerges is quite complex when historical and cross-cultural variation is taken into account. Households vary widely in membership, in the kinds of functions they perform, in the cultural values they represent, and in the ways they are tied to larger social units like extended families and communities. Even the psychological orientations of household members to one another, their roles and expectations, vary between cultural groups.

This complexity can be daunting, partially because each discipline uses different analytical concepts to focus on different aspects of the household. One person's dependent variable is another one's cause. One study works with a population of millions while another uses a sample of 25. In this respect the household is a microcosm of the problems that beset social science in general.

Unlike the other disciplines mentioned above, anthropology and consumer research bring to household studies a history of interest in what goes on within the family, in the interchanges between members. In a previous paper I told anthropologists that consumer research has important insights to offer them in understanding the inner workings of households (Wilk 1986). Here I want to turn the tables and argue that anthropology has both concepts and methods that can be of use in consumer research.

In their efforts to conceptualize household behavior in terms of purchasing and decision making, consumer research has depended on the core concepts of value hierarchies, socialization, and stage models of the decision process. Value or goal hierarchies (beginning at Maslow 1943) are a means of ranking the different kinds of influence (e.g. psychological, physical, cultural) that motivate action. Socialization is the process by which individuals are inculcated with these values through identification with a 'reference group.' In stage models, individuals go through a sequence of actions, thoughts, or processes, each influenced by different combinations of values, goals and circumstances. Sirgy tabulates eleven different stage models that involve goal hierarchies (1984, p. 144). These models are based on individual cognitive processes and do not seem well suited to group decision making like that seen in households.

Nevertheless, the concepts of socialization, goal hierarchies, and stage models have been the basis of many studies of household behavior. A decision is typically seen as a stepwise process, during which different roles are taken by different household members, with the outcome affected by resources, personalities, and outside influences (e.g. Sheth 1974, Davis and Rigaux 1974, Park 1982, Wortzel 1980). These models typically prompt studies of the heuristics of negotiation or conflict resolution during the stages of decision making (Spiro 1983), and the relative influence of husbands and wives on the outcome (see critique in Davis 1976, papers in Roberts and Wortzel 1984). Decisions are often treated as isolated events within a limited time frame, and changes in roles and power result from external cultural processes.

Anthropologists have a different and complementary perspective to offer, rooted in their interest in the ways that rules, values, and norms of behavior are generated and reproduced as part of the social process. In this view, the rules of decision making are not simply something learned through socialization, they are constantly negotiated, established, and changed during all kinds of social behavior, especially decision making. Every social event uses rules and norms as ground rules, but also questions, modifies, and renegotiates those rules through action and outcome (Bailey 1969). Thus the purchase of a first new car after a child is born may lead husband and wife not only to buy a different kind of car from what they had previously bought, but also to renegotiate the very roles and rules that had guided previous decisions. Participants in household decisions are usually aware that they are always setting precedents, and they may be more concerned with that consequence than with the actual item being decided upon ("I don't really care what kind of sofa we get, but if I let her decide by herself she'll think she can boss me around."). The chain of decisions and precedents never ends as long as the household stays together, so nothing is ever settled "once and for all."

This perspective puts emphasis on conflict, negotiation, and the symbolic processes by which objects and situations are invested with meanings, meanings which are in turn used in social situations. Decisions about purchasing items involve issues of meaning and definition, so the struggle is often over terms and symbols, and the outcome is often a new meaning entirely. A decision about what furniture to buy for the living room resolves into a disagreement about what the living room is supposed to "be for", what it means and symbolizes. Is it an unused display space for expensive symbols of success, or is it a common space where all the family comes together to share the warmth of a fire and conversation in the

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evening? The outcome of such disagreement may be an entirely new set of meanings.

Purchasing decisions look very different from this point of view. They are not simple outcomes of values and roles but are part of the process by which values and roles are negotiated and transacted. In studying decisions to purchase wood-burning stoves in California households, I found that the decision-making process never ended with the purchase of the stove. The actual purchase of the item was mere punctuation in a years-long chain of negotiations, accommodations, and changes, which included many other items beside the stove. The woodstove was simultaneously a catalyst for long-simmering conflicts ("He's always so tight when it comes to the house."), a subject of the negotiation of meanings and values ("I think anything efficient is beautiful, but she wants something where you can see the fire, even if it means wasting heat up the chimney."), and a counter in a social process of marriage and family ("I thought it would bring the whole family together in the den in the winter. He wants us all to help gather wood in the mountains."), that often have long-term ramifications ("Our whole life style had to change after we bought it."). Often I found that these processes interwove the purchase and use of very different and seemingly unrelated kinds of goods; he gets to buy the ugly but efficient woodstove, but only after she gets to buy a new carpet and drapes. And of course the story does not end when the new clean carpet is placed in front of the ash-breathing stove.

Cross Cultural Implications

These kinds of qualitative interactions are amenable to quantitative study, but only after relevant problems, issues and variables have been identified through ethnographic research. This is true even in a culture where the researcher is a native, and it is more emphatically true when the households are of another culture entirely. For cross-cultural differences in household decision making cannot be reduced to simple dimensions like "patriarchal" vs "equalitarian" (Green et al. 1983) or even to differences in gender or marital roles and decision making heuristics (Hempel 1974, Imperia et al. 1983).

Rather, in each cultural and economic setting households will speak different symbolic languages, negotiate or conflict in different ways about different issues using different rules. This does not even consider the large differences in household membership between cultures. Imagine the decision making processes in a household where married brothers live together with their nuclear families, and all resources are ultimately controlled by the eldest brother (Carter 1984, Hawkesworth 1981). In West Africa it is dangerous to even speak of husbands and wives as making household decisions together, as it is common for them to have separate incomes, separate budgets, and no common property (Guyer 1981).

Does this mean that we should give up hope of finding regularities in household behavior between cultures? Certainly not. Ethnographic cross-cultural study of household decision making has the potential to help us place understand our own culture as well as that of others we study. In the rest of this paper I will give an example of how this can happen, based on research among middle class Anglo-American homeowners in Santa Cruz County, California (Wilk and Wilhite 1984, 1985), and Kekchi Mayan small farmers in southern Belize, Central America (Wilk 1983, 1984, 1986).

Case Studies

In both cases, one of the goals of research was to understand how and why households decided to allocate resources to housing, including home purchase, construction, and improvement. The contrasts were great. Our suburban Californian homeowners often seemed obsessed with their houses; devoting a majority of their leisure time to home projects, and spending a majority of their income on housing expenses.

Most of the Kekchi farmers lived in pole-and-thatch houses built by groups of friends and relatives from materials gathered in the forest, with no cash investment at all. Furnishings were also home-made, and almost all cash income was spent on tools, basic supplies like kerosene and sugar, and personal consumables and clothing. Interestingly though, a few Kekchi households that had a bit more money from part-time farmwork, from selling cash crops like cocoa, rice and marijuana, or from petty shopkeeping, were setting off on a radically new course of consumption. Rather than buying farm equipment, jewelry or fancy clothing, they spent their money on uncomfortable concrete block houses with corrugated iron roofs, and assortments of poorly-made but expensive furniture.

Californian and Kekchi households could not be more different in social and economic circumstances, but like all households that exist in a modern cash economy, they share in a basic dilemma, and sometimes they hit on common solutions. This is especially clear in the Kekchi case where households are emerging from a non-cash subsistence economy into the capitalist commodity and wage economy, and it is possible to examine the resulting changes in consumption behavior.

In California, the main dynamic of decision making about the house was dyadic between husband and wife (or cohabiting couples), though children often played important non-speaking parts in the drama. Patterns of expenditure on housing corresponded closely with stages in the household life course. Transitions between stages as a result of the birth or departure of children, or changes in the degree of involvement in jobs and careers were often marked by alterations to the house.

These patterns were ideologically reflected in many ways. Couples often spoke of 'the marriage' as a concrete thing. In many ways they expressed the idea that marriage and home were synonyms, and both terms represented values opposite to those of the working world. The house was more than a physical structure -- it was the shell for a family (family + house = home), a 'haven in a heartless world.' The home was the place where the harsh economic reality of the workplace did not penetrate, a bastion of emotional values given sanctity with the label of 'tradition.'

This cultural conception of house and home in California can be traced historically back to the rise of the middle classes in the later phases of the industrial revolution. Historians have found that it was during that period that the house was tagged as 'private' space, the domestic realm of shelter for wife, children, and family values. The rising middle class adopted the home as a paramount symbol of respectability at the same time that they were formulating the ideal of a strict sexual division of labor within a nuclear and independent family unit. These ideals reached their apex of popularity only in this century, perhaps more so in the United States than anywhere else. They have been linked to the exclusion of women from labor markets and their redefinition as 'homemakers' (Lofgren 1984, Rapp 1978). So the modern pattern of high spending on the house is clearly related to the male single-earner family (Dunton 1983).

I suggest, following Curtis (1986), that the major problem for middle-class American households in their consumption decisions, is how to distribute the measurable resources of the household fairly, when the contributions of all the members cannot be measured. Curtis calls this non-economic exchange in an economic environment. In other words wage workers bring a measurable product into the household, but this money must then be weighed against other products that are not readily measured. How many dollars an hour is housework worth? Love? Mowing the lawn? Caring for a dying father? Marital sex? Most of our informants resisted the very idea of putting monetary values on what they do for the family, on the things they do for love. They tend to deny the possibility that replacement costs (e.g. the price of day care) were real measures of the value of domestic labor.

The crisis of allocation that embroils California households is common to all cultures where households depend on a mixture of wage or cash income, and domestic labor. The household pool includes tangible money, measureable labor, and immeasurables like love, security, and promises of continued support and love in the future. The crisis comes from the need to portion out the household pool to members for their own uses. Who should get money? Who should control it? In some cultural and economic settings the issue is very clear; Ashanti men in Ghana must provide a certain amount of cash to their wives, or they will not get the dinner they want when they want it (Clark 1986). If women's work has little value on the wage market, and their household labor can be cheaply replaced, they have little bargaining power in the household and we should expect to see the balance skewed in the husband's favor. But the situation in California today is anything but clear for household members.

I suggest that when households have difficulty bargaining or negotiating because the balances of inputs and outputs are unclear or obscured, they find solutions that avoid the problem of setting values in the first place. Rather than spending household resources (the rights to which are unclear and in dispute) on one individual or the other, spending that requires explicit division, they spend it on what belongs to both. Instead of fighting over who gets what, if he gets to buy a new sports car or she gets to spend on expensive clothes, they agree to spend on the house, on a common good. Home improvement allows the family to avoid the issue of determining who gets what, because ostensibly everyone gets to share.

Instead of arguing over fundamental and dangerous issues like the value of housework or the amount of resources either spouse brought into the marriage, the dispute now becomes a choice between different kinds of home improvement. Do we spend on landscaping, or a new kitchen? An extra room for the expected child, or a new roof?

As a solution to a crisis of allocation, spending on the home can easily lead into a process of cultural 'involvement'; intensification of the cultural pattern through feedback. Home improvement is often time and labor intensive -- people spend more time at home (tending to describe themselves as 'homebodies'), which in turn justifies further spending on home improvement. The home becomes a theater set, a stage on which the family's internal dramas are acted out, to which friends, neighbors, and relatives are an invited audience.

The households that escape this involvement, in our small sample, were those in which both husband and wife had strong career or recreational interests outside the home, and these tended to be two-worker households or worker/student households. In these cases the dangers of imbalance in the flow of resources was much lower, and allocation of resources to individual household members was not as threatening. When both husband and wife had cash incomes we found a greater willingness to discuss the values of housework, long term security, and child care, though this did not mean that real equality was ever achieved (Hartmann 1981).

Kekchi households entering the cash economy faced a very different crisis of allocation. Custom and tradition provide ready guidelines for the allocation of food, clothing, and small amounts of cash within farming households that produce their own food and basic goods. The major issues within these households revolve around how to allocate productive labor. These decisions involve many people in the community besides household members, because households cooperate closely with each other on a daily basis in cultivating fields, feeding domestic animals, child care, home maintenance, and home construction. Negotiations between household members mostly concern work; will the husband work with the wife's father today, or will he go hunting with his brother? Will a son go help his grandfather plant corn, or will he stay home and help his elder brother fix the chicken coop? Is the wife going to go to the field to harvest cassava, or go to

her mother's house to help dry and process their coffee crop? Conflicts are generally over the quantity and quality of work, not the distribution of the products that result (though this could be very different in years of shortage or famine). The constant exchange of labor, food, and household items between individuals and households tend to obscure the short-term balances between household members.

When larger amounts of cash income enter this household subsistence economy, it causes a drastic change in patterns of allocation and in the kinds of decisions that must be made. The structure of the local economy is such that only men have commanding positions in procuring cash income (as casual farm workers or by selling cash crops), so a new imbalance enters the domestic economy at the same time that standards of living are rising. Who has the right to decide how to spend the money that came from selling rice? The husband who took it to market and did the heaviest work on the farm? The sons who provided crucial labor in getting the harvest done, even though they could have gone to town to make money on their own? The wife who kept them all fed while working, and who dried the rice in the sun for a week?

Young unmarried men are the most active in finding wage labor outside the village. How much of their wages should they be allowed to keep, now that they no longer help to provide food for the family by working in the fields? How much of a say should they have in deciding how their contributed earnings are spent? The increase in divorce and family instability observed in the richer villages seems to have a lot to do with these allocation problems. Older brothers who stay at home and help their fathers farm end up resenting their younger brothers who work in town and come home with boom boxes. Husbands and wives make demands of each other that seem unprecedented; parents argue about how much money to spend in educating children; relatives arrive right after the harvest and need cash to send a sick baby to the hospital.

At the same time that the earnings from farming and wages are becoming more important, the network of community labor cooperation and the help network between households begin to weaken, posing a danger to the farm economy. Unable to depend on their neighbors and kin for extra farm labor and material assistance, parents must depend more heavily on their children for farm and household labor. Given all these pressures, keeping the household together is a major challenge, and keeping it an optimal farming or business enterprise at the same time is even harder.

The solution that many households adopt is not to try to divide cash income evenly or equitably at all. Instead they spend it on the construction and furnishing of a house, spending that is ostensibly for the entire household. Once sunk in concrete and steel, income is outside the grasp of relatives in need, and is no longer a constant source of contention. The issue is no longer what to spend the money on, but how best to use the house and maintain it. Houses have other special advantages as classes of goods for investment in this particular social setting.

Remember that parents have a vital interest in keeping children attached to the household as long as possible -- extending even after marriage, when they want their married children to live next door and maintain close economic ties. When the income produced by children before marriage is invested in the house, rather than in food, beer, or clothing for individuals, it creates a long-lasting tie of investment. Children now have prospects of sharing in the use of that house for substantial parts of their lives, and if they remain on good terms with their parents they may someday get a portion of their investment back through inheritance. Because a large and elaborate house is something of a status symbol within the community, children can also partake of their parents' prestige by continuing to reside in or close to their natal household after marriage. So in the long term, money invested in the house serves manifold social aims, even though the Kekchi lack the elaborate ideology of the house and home that is so firmly entrenched

in American culture.

As time goes on and the household becomes the paramount unit of economic decision making and consumption in Kekchi society, it is likely that an ideology that places new symbolic meanings on house and home will develop as well. The material shell of the home, the house, is not just a passive actor in this process. The house has proved to be a crucial artifact in understanding cultural change and modernization in a number of places in the world (e.g. Rodman 1985), not because it is a unique artifact, but because it is an artifact that is readily identified with the corporate social unit that inhabits it. In this sense the house is almost a 'natural' symbol of the household, and it is not surprising that so many cultures make the connection.

Conclusions

These brief and incomplete case studies both describe household decision making in situations of cultural change. In both cases household members seek to adapt their culturally received notions of proper behavior and their ideals of family roles to the immediate realities of work, returns from work, and allocation of those returns. In the peculiar fashion of all social institutions, the household is both a goal, and a vehicle for achieving more goals. Perpetuating the institution is a baseline requirement of each day's decisions and activities, the constant overhead of the decision process.

Both Belizean Kekchi and Californian household members approach purchasing decisions as a challenge to the basis of the institution itself, that basis being the willing participation of all adult members. Social goals therefore enter into every major allocation decision the household must face. This is more than just a procedure for conflict-avoidance (Park 1982). It is the actual construction, maintenance, and reproduction of the household as a viable entity. It is perhaps a measure of the difficulty of allocation decisions during times of rapid social and economic change, that so many households fail to stay together in both Belize and California.

Appendix

Research in Belize was supported by the National Science Foundation and the Wenner-Gren Foundation for Anthropological Research. Fieldwork was conducted between 1978 and 1981 in three communities totalling about 500 persons. Household decision making was not the main focus of research, which was concerned primarily with changes in household organization that result from changes in modes of production. Ethnographic interviews and questionnaires were the major means of gathering information.

In Northern California, research was supported by the Universitywide Energy Research Group of the University of California, and the University of California Appropriate Technology Grant program. Interviews were conducted with over 100 couples between 1982 and 1984, with the primary intent being the discovery of reasons for decisions for and against investment in energy-conserving technologies in the home.

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DISCUSSION

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The context of the Gaski paper is the old suspicion that much of marketing can be considered waste and inefficiency, at least from the point of view of the consumer. This view arose most strongly in the populist reactions to the growth of mass marketing. It has never totally been displaced in the general public's mind, but probably has diminished in importance relative to concerns about the impact of advertising.

The Gaski paper argues that a measure of relative market "efficiency" is important to understand consumer satisfactions with the bundle of products they consume. There are several possible uses of such a measure. The first would be to detect "problem areas" where a particular brand provides low satisfaction. Another would be to identify disparate consumer segments. A final use would be to provide policy oriented "benchmarks" for such issues as taxation.

There are several problems with the method suggested by Gaski. The first is that "efficiency" is very difficult to assess using only total consumer valuation and expenditure, especially between very different supply conditions. It is not particularly fruitful to compare the expenditures on consumer goods between an urban area such as Toronto with the outback of the Northwest Territories. Even the most efficient marketing system must reflect the higher costs of doing business.

A second problem area is that the measure provided uses average satisfaction, while the most important decision criteria is marginal satisfaction. For consumer choice between products it is the marginal utility curve (weighted by price) which provides the means to allocate funds. This can also be seen by comparing a very steep MU curve with a flat MU curve; both could have the same average satisfaction while having quite different implications.

A third problem is that the measure provided can be seriously skewed by differences in the economic positions of the respondents. Consider an extremely wealthy person versus someone poor. In this case we would have $V_A(\$) \sim 0$ and $V_B(\$) = k$, where the index B refers to the poor consumer. But then

$$(V_A(P) - V_A(\$)) / V_A(\$) \sim \infty \quad (1)$$

These are some of the main reasons why researchers utilize the concept of consumer surplus to handle these efficiency issues.

Given the definitional problems, the main use of the measure proposed by Gaski appears to be to identify different consumer segments and to serve as an adjunct to such approaches as conjoint analysis or "Defender" type models.

The Ratchford and Gupta paper also considers "efficiency", but in a quite different sense. Here the issue is whether choice theory can be used to estimate how costly it is to consumers when they have incomplete information about the purchase options available to them. Combined with the Srinivasan paper they represent a healthy step in the direction of merging competition and behavioral models. There is much fruitful work to be done in this area, as a consideration of the choices and actions by firms in response to the decision rules of consumers (whatever they are) has the possibility of combining much of the work in Marketing, which now is too often restricted to discussions within the different camps.

The goal of these papers is to estimate the losses to consumers which stem from two sources; the opportunity loss from buying the wrong product and the search costs incurred during shopping. As in the earlier paper, the most serious technical questions arise in trying to measure consumer losses as opposed to measuring the underlying demand. The demand determination follows some straightforward logic. The utility of the product minus its price gives a value distribution across products. Differences in individual position and search costs determine how much search each consumers will engage in. These together determine expected demands for the products and expected prices paid by consumers.

The most striking of the empirical findings in the Ratchford and Gupta paper is the magnitude of the search costs. They seem very high. There are two probable reasons for this. There is an implicit assumption in the authors' calculations that the price elasticities of consumers are symmetric around the average elasticity. It is this assumption, rather than their stated reliance on large N, which gives the particularly simple expression for costs of search. This assumption will tend to understate the true "average" elasticity, which consequently causes the search estimates to be too high. Second, the elasticities calculated using the Consumer Reports data may be biased.

A more restrictive problem with the approach is the specification of maximum opportunity loss V_{max} . Unless the product category is highly segmented and all consumers consider all of the products (despite historical consumption patterns) the definition of the appropriate consumption benchmark will be difficult. If the product category isn't cleanly split then it will be very difficult to get empirical estimates of the welfare losses.

The Srinivasan paper contains a number of useful behavioral qualifications to the approach used by Ratchford and Gupta. First, the gain calculation should be based on perceived benefits rather than on ex post actual benefits. Second, the gain calculation should be a search over the consumer's relevant set, not necessarily the total set. Third, risk neutrality is a strong assumption. And finally, internal search parameters will influence loss calculations. Unfortunately, the pilot nature of the surveys presented in Srinivasan paper are not yet sufficient to adequately test the importance of these qualifications.

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Abstract

Whether the costs to consumers of imperfect information are high enough to warrant intervention in markets has long been an important policy issue. But, there does not appear to be a comprehensive theoretical framework for studying the problem. In this paper, we develop measures of opportunity losses due to not choosing the "best" brand, and of the costs of search, based on a model of optimal search behavior.

Introduction

Whether government intervention to improve the informational efficiency of consumer markets is needed has long been an important policy issue (see Beales, et.al. 1981 for a comprehensive discussion). For example, a few studies that have supported the existence of inefficiency have implied that efficiency can be improved either by improving consumer information (Farrell 1980, Dardis and Gieser 1980, Maynes and Assum 1982), or by judiciously imposing strict quality standards (Sepstrup 1978). But, largely because of lack of a comprehensive theoretical framework for studying the problem, whether the costs of informational inefficiency are great enough to warrant intervention is still an open question.

By providing a framework for empirically measuring the costs of information in markets for durable goods, this study provides a first step toward answering this question. While many others have estimated losses due to inefficiency, we shall argue that none of these studies provides a totally satisfactory basis for their estimates. While we currently do not have the share or individual choice data needed to make definitive estimates based on our model, we do go on to present some preliminary estimates of the magnitude of information costs for several durables.

The Literature on Informational Efficiency

While there is a vast body of theoretical literature on the impact of imperfect information on market behavior (representative examples are Smallwood and Conlisk 1979, Carlson and McAfee 1983), we are primarily interested in empirical studies of informational efficiency. Broadly speaking, the empirical studies have looked at: correlations between price and quality; retail price dispersion; price of best vs. worst choice; whether a brand is on the efficiency frontier.

There is a large literature which presents correlations between prices and quality ratings provided by Consumer Reports: these are either motivated by attempts to assess how well price acts as a signal of quality (Oxenfeldt 1950, Friedman 1967, Riesz 1978, Dardis and Gieser 1980, Geistfield 1982, Gerstner 1985), or by attempts to measure market efficiency (Morris and Bronson 1969, Sproles 1977). On average, these studies have found a low positive correlation between price and quality, which has been stable over time, and that there is large variation in these correlations across product categories. This has led some authors to conclude that markets generally don't function very efficiently (Morris and Bronson 1969, Sproles 1977). As will be explained in the next section, however, we do not believe that this conclusion necessarily follows from the observed price-quality correlations. Recent work by Tellis and Wernerfelt (1985) develops a theory aimed at explaining observed price-quality relationships, and how these may vary across markets. While this is a welcome addition to this largely atheoretical body of literature, this work does not attempt to develop measures of the magnitude of information costs, which is the subject of the present study.

Studies of price dispersion in retail markets (Pratt, Wise and Zeckhauser 1979; Maynes and Assum 1982; Shugan 1985) have generally found substantial price dispersion, with maximum prices often several times the minimum for items of essentially the same quality. Maynes and Assum argue that this indicates that retail markets are informationally imperfect. While some of the observed dispersion may be due to unmeasured brand and retailer attributes, it seems hard to argue with this basic conclusion. Moreover, given that information is costly, the finding that retail markets are informationally imperfect does not seem surprising. The studies of retail price dispersion do not address the more critical question of the degree of informational imperfection: exactly how much the imperfections cost consumers is not answered.

By examining price differences between "best" and "worst" choices based on quality rankings in Consumer Reports, Morris and Bronson (1970) estimated that on average consumers can incur a maximum loss of 27.4% by erratic purchasing. Again, however, it is hard to draw any conclusions about the extent of market inefficiency from this estimate: losses depend on whether the market share of the "worst" choice is trivial or large.

While other authors have measured quality using the composite ranking of quality provided by Consumer Reports, Hjorth-Andersen (1984) employed the ratings on each individual attribute in developing his estimates of inefficiency. Using a concept similar to Lancaster's (1966) efficiency frontier, Hjorth-Andersen judged brands which were inferior on all attributes, and still higher in price, compared to at least one other brand, to be inefficient. Employing a number of strong assumptions, he concluded that consumers could save 12.8 percent of their expenditure if all the inefficient brands were removed from the market. There are a number of problems with Hjorth-Andersen's approach: brands may be very close in price and attributes to the dominating brand, or not inefficient at all if all attributes are considered, so that losses resulting from buying these brands are small or nonexistent; on the other hand, Hjorth-Andersen's calculations do not consider possible losses that may result from non-optimal choices among efficient brands.

Problems with Empirical Price-Quality Relations

We have stated above that correlations of prices with Consumer Reports quality rankings say little about informational efficiency. To provide a framework for understanding this, let the information cost of making any choice equal the sum of search costs, and the dollar opportunity loss resulting from not choosing the best brand for the money. Consider the case in which neither price nor quality varies much. In this case, information costs will be low even though price and quality may not be highly correlated: choosing some brand other than the best for the money will not produce much of a loss. Conversely, when price and quality vary a lot, information costs may be high even though price and quality show a high correlation: Choosing some brand other than the best for the money may result in a substantial loss. Even when price and quality vary a lot and are not correlated, aggregate losses may not be large if only a small number of consumers fail to avoid brands which are poor buys for the money. In short, observed price-quality correlations provide a poor basis for judging market efficiency.

Though they are widely used, the validity of the Consumer Reports rankings as a measure of quality is also open to question. The major problem is that the weights used for individual attributes in developing the rankings need not reflect the preferences of actual consumers; indeed if

consumers are sufficiently heterogeneous in their preferences, it may be impossible to develop a unique quality index that would reflect the preferences of all. On the other hand, if the various attributes are positively correlated, any arbitrary weighting scheme will tend to yield a similar ranking of brands (Curry and Faulds 1986); the Consumer Reports scheme can be used in this case. However, whether attributes have the required positive correlation is an empirical question; the answer to this question will undoubtedly vary across products.

A Framework for Studying Informational Efficiency

Despite the considerable amount of empirical work on the problem, there is no really comprehensive theoretical framework for developing empirical estimates of informational efficiency. We will try to develop such a framework in this section.

We wish to estimate information costs, which are of two types: costs of search, and opportunity losses due to not choosing the optimal brand. An optimizing consumer would search to the point where the marginal costs of search were equated with the expected marginal opportunity loss of not choosing the best alternative. At this point, both search costs and opportunity losses will ordinarily be positive; ideally one would add up both costs to construct a composite measure of information costs. In addition, there might be another type of cost: brands currently on the market might be less attractive than the alternatives which would result if information were somehow made less costly (Smallwood and Conlisk 1979). Absent a valid general equilibrium model, this last type of cost might be impossible to estimate.

In our model, we shall assume that the consumer will choose one brand from a set, and spend his remaining budget on other goods and search costs. The utility of alternative brands is defined by values of their attributes $X_1 \dots M$. For simplicity, we will make the assumption that the consumer's utility function is additive-separable in the good being studied and a composite of all other goods, Y , which is measured in dollars; this assumption allows income to drop out of the comparison between brands. Because the utility function is unique only up to a monotonic transformation, we can, without loss of generality, assume that utility is measured in dollars. Given these assumptions the utility of any brand i becomes:

$$V_i = f(X_{1i}, X_{2i}, \dots, X_{mi}) + Y, \quad (1)$$

and the budget constraint is:

$$P_i + Y + C = I, \quad (2)$$

where P_i is price of brand i , C is search cost, I is income, and the price of Y is one dollar because we have chosen to measure Y in dollars. We can substitute $Y = I - P_i - C$ in (1). But since $I - C$ is a constant across alternatives, it becomes redundant in comparisons between brands, and may therefore be ignored. If, for simplicity only, we assume that $f(X_{1i}, X_{2i}, \dots, X_{mi})$ is linear, we can express the utility associated with the choice of i as:

$$V_i = \sum_k W_k X_{ki} - P_i \quad (3)$$

The consumer would like to find the brand with the highest V_i , but he must pay the cost of locating it.

The Relation Between Search Costs and Demand

For simplicity, assume that the consumer knows the general distribution of utilities across brands, but not the utility of any given brand (this is a common assumption in economic models of search). There are N brands, and each utility occurs with a frequency $1/N$. Then the expected gain from searching for a utility higher than V_j is:

$$G_j = \sum_{i=j+1}^N (V_i - V_j) (1/N) \quad (4)$$

The consumer is assumed to use a stopping rule, so that if $C > G_j$ he stops; otherwise he continues searching (for simplicity we assume that C , the cost of search, is constant across brands).

Within this general framework, we can derive a general expression for demand as a function of search costs (Rosen 1978; Carlson and McAfee 1983): the demand function can be either that for a market segment whose members have the same utility function; or for the whole market if preferences are homogeneous. Let the distribution of search costs across this segment be $H(C)$, and let $H(T)$ denote the highest search cost in the market. Let $1, \dots, N$ index the brands from lowest to highest utility. Some consumers would have search costs so high that they would buy the lowest utility brand if they encountered it: for these consumers $C > G_1$. But the odds that they encountered this, or any other brand, are only $1/N$. If C_1 is the cost which would make a consumer indifferent between buying the lowest utility brand and searching further, demand for this brand can be written as:

$$Q_1 = (1/N) (H(T) - H(C_1)), \quad (5)$$

where $H(T) - H(C_1)$ is the frequency of consumers who have search costs high enough to make them stop searching even if they encountered the lowest utility brand.

Similarly, there are another $H(C_1) - H(C_2)$ consumers who would reject the lowest utility brand, but stop if they encountered the second lowest brand. But the odds of this encounter are $1/(N-1)$. Demand for the second-lowest brand therefore becomes:

$$Q_2 = (1/N) (H(T) - H(C_1)) + (1/(N-1)) (H(C_1) - H(C_2)), \quad (6)$$

since it also gets its share of the high search cost customers. Similarly,

$$Q_3 = (1/N) (H(T) - H(C_1)) + (1/(N-1)) (H(C_1) - H(C_2)) + (1/(N-2)) (H(C_2) - H(C_3)) \quad (7)$$

$$\vdots$$

$$Q_N = (1/N) (H(T) - H(C_1)) + (1/(N-1)) (H(C_1) - H(C_2)) + \dots + H(C_{N-1} - 0)$$

In sum, demand depends on the distribution of search costs: if these are high, brand shares will tend to equality; if most of these are low, high utility brands will tend to get disproportionate shares.

Extending the framework of Carlson and McAfee (1983) to differentiated products, we can derive a linear demand function if $H(C)$ is uniform:

$$H(C) = \int_0^T 1/s \, dc = 1, \quad (8)$$

where $1/s$ is the density of search costs, total demand is T/s . Then, as explained above:

$$Q_1 = (1/N) \int_{C_1}^T 1/s \, dc = (1/N) (T/s - C_1/s) \quad (9)$$

But, since C_1 is the point of indifference between choosing brand 1 and searching further, Equation 9 can be written as (see Equation 4):

$$Q_1 = (1/N) (T/s - \sum_{i=2}^N (V_i - V_1) (1/sN)) \quad (10)$$

By similar reasoning, expressions for Q_2, \dots, Q_N can be derived. After some algebra, the general demand function reduces to:

$$N(Q_i - \bar{Q}) = (1/s) (V_i - \bar{V}) \quad (11)$$

Substituting the components of V from (3), and adding a random term (u_i) for brand-specific utility, we get:

$$N(Q_i - \bar{Q}) = \sum_k \frac{W_k}{s} (X_{ki} - \bar{X}_k) - \frac{1}{s} (P_i - \bar{P}) + \frac{u_i}{s} \quad (12)$$

which could, in principle, be estimated by regression.

The coefficient of price identifies s , the density of search costs. In principle, other demand functions could be derived from other distributions of search costs; presumably the best-fitting function would best reflect the actual distribution.

Expressions for Information Costs

The above framework will aid in developing and interpreting expressions for information costs which can be estimated empirically. In general, the opportunity loss due to imperfect information for any segment with homogeneous preferences can be expressed as:

$$L = \sum_i Q_i (V_{\max} - V_i), \quad (13)$$

where Q_i is quality of brand i , V_{\max} is maximum available utility. For the linear demand function in (12), equation (13) can be expressed as (see Appendix for derivation):

$$L = N\bar{Q}(V_{\max} - \bar{V} - \frac{1}{T}\sigma_v^2) \quad (14)$$

where $T = sN\bar{Q}$, is maximum search cost. Average search cost is then $T/2$. Opportunity loss thus depends on the difference between maximum and average utility, which reflects expected losses if choices were made at random, and is reduced by the ratio of the variance in utilities (σ_v^2) reflective to maximum search cost, which reflects the impact of search. After some further algebraic manipulation (see Appendix), Equation 14 can also be expressed as (for large N):

$$L = N\bar{Q}(V_{\max} - \bar{V} + \frac{\bar{\epsilon}}{p}\sigma_v^2) \quad (15)$$

where $\bar{\epsilon}$ and \bar{p} are mean value elasticity and price respectively: the more elastic the demand relative to price, the higher the search, and the smaller the loss. Moreover, $T = \bar{p}/\bar{\epsilon}$, and average cost per search equals $\bar{p}/2\bar{\epsilon}$. So estimates of mean value demand elasticity, average price, and the distribution of utilities are needed to identify the various components of information costs.

It should be emphasized that the above expression for opportunity loss is valid even if our assumptions about search behavior are violated seriously, as long as the hypothesized linear demand function holds. However, another distribution of search costs could readily produce another form for the demand function: for example, another distribution of search costs might produce the logit, a function widely used in empirical work. The logit function can be written as:

$$M_i = \frac{\text{EXP}(\sum_k W_k X_{ki} - bP_i)}{\sum_i \text{EXP}(\sum_k W_k X_{ki} - bP_i)} = \frac{\text{EXP}(b(\sum_k W_k X_{ki} - P_i))}{\sum_i \text{EXP}(b(\sum_k W_k X_{ki} - P_i))} \quad (16)$$

The various weights would be estimated either from data on individual choices, or from data on market shares. Unlike the standard logit model in which choice probabilities result from random variation in utility across people or time, the maintained hypothesis would be that these probabilities result from stopping search before the maximum utility brand is found.

Based on the logit, an expression for opportunity loss is:

$$L = N\bar{Q}(V_{\max} - \sum_i \frac{\text{EXP}(\frac{-\bar{\epsilon}}{p}V_i)}{\sum_i \text{EXP}(\frac{-\bar{\epsilon}}{p}V_i)} V_i) \quad (17)$$

since $b = \bar{\epsilon}/\bar{p}$ if N is large. Thus the loss is proportional to maximum utility less a share weighted average of utilities. A larger b (or $\bar{\epsilon}/\bar{p}$) implies less weight to small V_i , and hence a lower loss. Again, it is significant that the ratio of elasticity to price determines the magnitude of the loss.

The above logit model assumes homogeneous preferences across those it is estimated on. If preferences are heterogeneous, and the estimated logit parameters represent averages, it is easily shown that the loss expression in (17) represents an upper bound.

Up to this point we have only considered opportunity losses. Especially because consumers may lower opportunity losses by spending more on search, it is also necessary to consider expenditures on search. For the case of uniformly distributed search costs, expected aggregate search costs can be expressed as (see Appendix for a derivation):

$$SC = N\bar{Q}(T/2 + \sigma_v^2/2T). \quad (18)$$

The first term in parentheses is simply average cost per search; the second term captures the impact of going beyond the initial search. (An expression for the expected number of searches is also presented in Equation A10 of the appendix.) If we combine (14) and (18), we can get an expression for total loss, which is the sum of opportunity losses and search costs:

$$TL = N\bar{Q}(V_{\max} - \bar{V} + T/2 - \sigma_v^2/2T). \quad (19)$$

The term in parentheses represents loss per unit sold. The loss increases with the difference between maximum and average utility, and with average search costs, decreases with the variance of utility relative to search costs. Intuitively, the latter effect represents the impact of search on limiting losses.

Empirical Implementation of the Model

In principle, it should be quite feasible to estimate the above relationships empirically: all one needs are estimates of the distribution of utilities across brands, average prices, and the price elasticity of demand. One could, for example, estimate individual utilities by conjoint analysis, and use these estimates to form segments. These estimates would provide the essential data needed to estimate utility distributions. Given data on the distribution of brand choices by segment, one could proceed to estimate price elasticities for each segment. Then losses could be calculated for each segment, and added across segments in to an aggregate figure. It should be possible to obtain the required data on a sample of recent purchasers. Given that estimates are not dependent on any of our admittedly strong assumptions about search behavior, this analysis should provide reasonable estimates of opportunity losses. Because they are dependent on our assumptions about sampling and the distribution of search costs, any estimates of aggregate search costs would be much more problematic.

While we do not at the moment have the desired data on utilities and price elasticities, it is still possible to make some reasonable estimates of losses. While there do not seem to be any published elasticity estimates for brands of most household durables, it is known that price elasticities for most nondurables are on the order of -1.5 to -3 (see the review in Neslin and Shoemaker 1983); it has also been estimated that price elasticities for automobile brands are on the order of -5 to -7 (Cowling and Cubbin 1971). Since our earlier analysis suggests that elasticities should increase with price, unless search costs also increase as fast as price ($\bar{\epsilon} = \bar{p}/T$), it seems plausible to assume that price elasticity for appliances is somewhere between the two extremes defined by the inexpensive nondurables and the expensive cars. Accordingly we will base empirical estimates on the alternative assumptions that $\bar{\epsilon} = -3$ and $\bar{\epsilon} = -5$.

While the number of utility functions that consumers might have is unlimited, we will confine our analysis to two functions which might plausibly represent the preferences of at least some consumers. One uses attribute weights obtained from a regression of prices on attributes (hedonic price function; see Rosen 1978): utility is thus defined as the negative of the residual of this regression. This formulation of utility, which has been used before in empirical work (Cowling and Cubbin 1971), should provide a good approximation to preferences if consumers have homogeneous preferences (Rosen 1978).

We also studied losses that would result from a preference

function where the attribute weights were those assigned by Consumer Reports. To recover the weights, we regressed the quality ranking on the various attributes: while the dependent variable is, strictly speaking, ordinal, there is considerable evidence that OLS is robust with ranking data relative to procedures designed for ordinal data, such as LINMAP or MONANOVA (Green and Srinivasan 1978). Hence we felt justified in using regression. Spearman correlations between estimated and actual quality rankings were all above .8 for the 5 appliance categories studied. To scale this function with respect to price, we regressed price on estimated quality from the above regression; the negative of the residuals then provided a utility function which maximized the correlation between price and a weighted sum of attributes, where the weights approximate those used by Consumer Reports.

Data on prices and attributes were taken from recent tests in Consumer Reports for the following five products: vacuum cleaners (1982), ranges (1979), refrigerators (1985) washing machines (1985), air conditioners (1982). For the utility functions and elasticities described above, estimates of losses due to imperfect information are presented in Table 1 for these five categories. As Table 1 indicates, there is considerable agreement between the estimates obtained from the alternative utility functions. As expected, more negative elasticities signal lower costs. Average costs per search seem high, particularly for the more expensive appliances when $\epsilon = -3$: one might realistically expect demand for these more expensive appliances to be more price elastic. While search costs and total losses may seem high, it should be kept in mind that each consumer must search at least once: on average an amount equal to c is not discretionary. With the exception of vacuum cleaners, which incur the highest percentage losses

TABLE 1

ESTIMATES OF AVERAGE LOSSES PER UNIT SOLD DUE TO IMPERFECT INFORMATION, FIVE APPLIANCE CATEGORIES

Parameter	Vacuum		Range		Refrigerator		Washing m/c		Air cond.	
	Hedonic Quality ^a	Quality	Hedonic Quality	Quality	Hedonic Quality	Quality	Hedonic Quality	Quality	Hedonic Quality	Quality
$V_{MAX} - \bar{V}$	\$ 87.57	\$113.79	\$ 73.09	\$116.79	\$ 76.92	\$ 99.28	\$ 73.10	\$ 70.69	\$ 54.13	\$ 85.32
\bar{V}	42.05	68.98	36.90	70.09	53.46	83.60	38.88	42.04	53.84	77.04
\bar{V}	214.80		538.00		665.88		513.73		391.78	
Given $\epsilon = -3$										
Average cp. loss	\$ 62.87	\$ 47.33	\$ 65.49	\$ 89.39	\$ 64.04	\$ 67.79	\$ 64.27	\$ 60.37	\$ 31.93	\$ 39.87
Average search cost	46.15	69.02	93.46	103.36	117.42	126.73	90.04	90.78	76.40	88.02
Total loss	111.02	116.35	158.95	192.75	181.46	194.52	154.31	151.15	106.33	127.89
cp. loss/ \bar{P}	.29	.22	.12	.17	.10	.10	.13	.12	.08	.10
Total loss/ \bar{P}	.52	.54	.29	.36	.27	.29	.30	.25	.28	.33
Average # of searches	2.22	2.59	1.41	1.65	1.35	1.45	1.43	1.41	1.41	1.65
$c/T/2$	35.96	35.80	89.67	89.67	110.98	110.98	85.62	85.62	65.30	65.30
Given $\epsilon = -5$										
Average cp. loss	\$ 46.41	\$ 3.03	\$ 60.44	\$ 71.13	\$ 55.46	\$ 46.80	\$ 58.39	\$ 53.49	\$ 17.14	\$ 19.57
Average search cost	42.06	76.86	60.13	76.63	77.32	92.83	58.73	59.97	57.68	77.05
Total loss	88.47	79.92	120.57	147.76	132.78	139.63	117.12	113.46	74.82	86.62
cp. loss/ \bar{P}	.22	.01	.11	.13	.08	.07	.11	.10	.04	.02
Total loss/ \bar{P}	.41	.37	.22	.27	.20	.21	.23	.22	.19	.22
Average # of searches	3.04	3.65	1.68	2.09	1.58	1.75	1.71	1.69	1.69	2.09
$c/T/2$	21.48	21.48	53.80	53.80	66.59	66.59	51.37	51.37	39.18	39.18

^aHedonic refers to utility function employing weights based on regression of price on attributes; Quality refers to utility function employing estimated Consumer Reports weights.

and require the most search, mean opportunity losses are on the order of .10; these are generally well below search costs. Finally, our estimates predict little search, on average, a finding which is borne out by empirical evidence (Newman 1977).

A tentative conclusion that might be drawn from this analysis is that the costs of imperfect information might be substantial. Whether there is any effective way to lower these costs is, however, an open question. Consumers also appear to behave as if search costs are high. Whether these are really as high as our analysis suggests, or whether consumers simply engage in less-than-optimal search, is also an open question.

Conclusions

Responding to what we believe to be a deficiency in the

existing literature, we have developed a formal framework for studying the costs of imperfect information. We believe that this framework can be employed in empirical studies of information costs, and that it highlights the determinants of these costs.

Nevertheless, the model presented in this paper should be viewed as a beginning; there are a number of ways in which it might be improved. Some of these are:

1. Extension of the demand model to distributions of search costs other than the uniform. This would allow alternative demand models to be estimated, and would allow tests of the sensitivity of results to this assumption.
2. If policy implications are to be analysed, a general equilibrium framework will have to be developed.
3. The model might incorporate more realistic assumptions about the search process, such as unequal priors for brands.

Appendix

Derivation of Expression for Opportunity Loss from Linear Demand

Substituting (11) into (13) we get:

$$L = \Sigma \left(\frac{1}{SN} (V_i - \bar{V}) + \bar{Q} \right) (V_{MAX} - V_i) \tag{A1}$$

$$= \frac{V_{MAX}}{SN} \Sigma (V_i - \bar{V}) + N\bar{Q}V_{MAX} - \frac{1}{SN} \Sigma (V_i - \bar{V}) V_i - \bar{Q} \Sigma V_i$$

Since $\Sigma (V_i - \bar{V}) = 0$, $\Sigma (V_i - \bar{V}) V_i / N = \sigma_V^2$, this reduces to:

$$L = N\bar{Q}(V_{MAX} - \bar{V}) - \frac{1}{S} \sigma_V^2 \tag{A2}$$

But $\bar{N}\bar{Q} = T/S$, and hence $1/S = \bar{N}\bar{Q}/T$, giving (14).

To derive (15), note from (12) that, for large N,

$$\bar{c} = \frac{dQ_i}{dP_i} \frac{\bar{P}}{Q} \approx - \frac{1}{SN} \frac{\bar{P}}{Q} \tag{A3}$$

Solving for $-1/S$, we get $-1/S = \bar{c}\bar{N}\bar{Q}/\bar{P}$. Substituting this into (A2) and simplifying gives (15).

Derivation of Expression for Search Cost from Linear Demand

For sampling with replacement, which should be a reasonable approximation for large N, the expected number of searches is $1/r$, where r is the probability of stopping on the first try. For $T > C_1$, $r=1$; $C_1 > C_2 > C_3$, $r=(N-1)/N$; ... $C_{N-1} > C_0$, $r=1/N$. Given the uniform distribution, the expected cost in any interval $C_i > C_j$ is $(C_i + C_j)/2$. The number of people for whom $r=1$ is NQ_1 , since they buy Q_1 with probability $1/N$; the number for whom $r=(N-1)/N$ is $(N-1)(Q_2 - Q_1)$; the number for whom $r=1/N$ is $(Q_N - Q_{N-1})$. Thus expected aggregate search cost is:

$$SC = \left(\frac{T+C_1}{2} \right) NQ_1 + \left(\frac{C_1+C_2}{2} \right) \left(\frac{N}{N-1} \right) (N-1)(Q_2 - Q_1) + \dots + \left(\frac{C_{N-1}}{2} \right) (N) (Q_N - Q_{N-1}) \tag{A4}$$

This can be simplified to:

$$SC = \frac{N}{2} ((T-C_2)Q_1 + (C_1-C_3)Q_2 + \dots + C_{N-2}Q_{N-1} + C_{N-1}Q_N) \tag{A5}$$

It can be shown that (see 9):

$$C_{i-1} - C_i = (N+1-i)S(Q_i - Q_{i-1}) \tag{A6}$$

Substituting for C in (A5) and simplifying gives:

$$SC = \frac{SN}{2} \Sigma Q_i^2 = \frac{SN}{2} \Sigma \left(\frac{T}{SN} + \frac{1}{SN} (V_i - \bar{V}) \right)^2 \tag{A7}$$

Where the expression on the right can be derived from (11).

Noting that $1/S = \bar{N}Q/T$, (A7) can be simplified to:

$$SC = \bar{N}Q \left(-\frac{T}{2} + \frac{1}{2T} \alpha_V^2 \right) \quad (A8)$$

This is equation (18) in the text.

It is also easy to derive an expression for the expected number of searches. This is simply:

$$ES = NQ_1 + \left(\frac{N}{N-1} \right) (N-1) (Q_2 - Q_1) + \dots + N(Q_N - Q_{N-1}) = NQ_N \quad (A9)$$

But $NQ_N = (T/S) + (1/S)(V_{MAX} - \bar{V})$ (see 11). Using $1/S = \bar{N}Q/T$, We get:

$$ES = \bar{N}Q \left(1 + \frac{1}{T} (V_{MAX} - \bar{V}) \right) \quad (A10)$$

A Stability Condition

There must be some consumers in the segment who purchase the lowest utility brand. From (4), this implies:

$$T \geq \sum_{i=2}^N (V_i - V_1) \frac{1}{N} = \bar{V} - 2V_1/N \quad (A11)$$

This condition is satisfied for all of the estimates in Table 1.

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TOWARD MEASUREMENT OF CONSUMER MARKET EFFICIENCY

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Abstract

It is possible to specify a concept of market efficiency from the consumer's perspective, i.e., value received from consumption of a product category relative to the cost of consumption. Recognizing the importance of this value/cost relationship to consumers, marketers, consumer researchers, and public policy-makers, the following paper describes an attempt to operationalize the "consumer market efficiency" construct. Preliminary validation evidence is provided, along with suggestions for additional measurement research. The ultimate purpose of these efforts is to develop an ability to appraise various product markets in terms of how well they are performing the basic task of delivering satisfaction to consumers efficiently.

Evolution of Conceptual Background

Considering the recognized importance of such issues as consumerism and the social responsibility of business, development of a method for evaluating the net contribution of consumer marketing to human welfare or satisfaction would be useful and significant. Implied in the above reference to the "net" social contribution of consumer marketing is a comparison of its costs and benefits, in other words, an input/output-type measure of marketing efficiency. This perspective will be operative throughout the remainder of the paper and seems to be conventional, observable in most of the sparse literature related to the topic.

Early considerations of the efficiency of consumer marketing, or marketing in general, focused on efficiency from the standpoint of the producer or marketer. That is, the efficient intra-firm performance of marketing functions was the concern, with societal benefits implicit upon aggregation (Barger 1955, Beckman 1957, Bucklin 1970, Stewart and Dewhurst 1938), for example, estimates of distribution efficiency. Hollander (1961) observed that labor hours and monetary costs are the "only two measures by which we can evaluate the total inputs into the total marketing system." Regarding outputs, sales or consumer "votes in the market place" were offered as the appropriate index. However, Hollander also identified a potential problem in that profits, or the difference between sales and costs, are generally such a small percentage of the total that "input and output will always be roughly equal." This may complicate the task of determining efficiency. The same criticism can be applied to the suggested use of value-added as a measure of marketing output (Beckman 1957, Hollander 1961).

Profit itself may actually be interpreted as a possible surrogate for consumer marketing's net social contribution if one accepts the free-enterprise axiom that the producers which most efficiently provide the goods and services that people desire the most will be the most successful. In the words of Czepiel and Rosenberg (1976), "the cash register and profit-and-loss statement generate powerful feedback for . . . society about the satisfaction resulting from a given product." It is conceivable, of course, that higher profits will not always translate into greater consumer welfare, e.g., price increases without comparable increases in value. A parallel argument is represented by Balderston (1964) who proposes producer/marketer revenue as an indicator of efficiency, and Preston and Collins (1966) who protest that this "specifically neglects the welfare of consumer participants." From the perspective of consumers, sales revenue appears to be a better approximation of marketing input than output.

The Market/Consumer Perspective

Another aspect of the orientation adopted in this discussion, and study, is that, rather than attempting to analyze the efficiency of consumer marketing in general, it may be more empirically tractable to isolate the performance of

individual markets. Since markets can be considered components of the marketing system, and the function of consumer marketing is to actualize potential exchanges in markets for the purpose of satisfying human needs and wants (Kotler 1976, p. 5), such an approach would seem to be defensible.

Also, from the preceding discussion it can be posited that there is an implicit, qualitative dimension to marketing output, from the consumer's perspective, that is far more difficult to specify than the inputs to the marketing system which may be subject to monetary measurement, e.g., costs to consumers, prices, or sales revenue. It is advocated here that the proper specification of this elusive construct is utility, in the strict economic usage, or the term's marketing/consumer behavior-language translation: satisfaction.¹ Justification for applying this interpretation to the output side of "consumer market efficiency" comes from marketing's ultimate purpose of consumer satisfaction (Czepiel and Rosenberg 1976, Kotler 1976).

There have been relatively few efforts to empirically measure consumer satisfaction in this general context. Among representative examples, Cardozo (1965) operationalized the construct as a product rating on a scale of zero to 100, representing "very inferior" to "vastly superior" in comparison to other products. Swan and Combs (1976), designating consumer satisfaction as a function of the expectation-product performance relationship, merely asked respondents to state instances of satisfaction and dissatisfaction, and "what happened to make you satisfied (dissatisfied) with this item?"

Some have found it convenient to focus entirely on consumer dissatisfaction, defined by Anderson as "the degree of disparity between expectations and perceived product performance" (1973). In his study of the effects of disconfirmed expectancy, Anderson developed a quasi-monetary measure of satisfaction by having subjects estimate the cost (worth) of ballpoint pens they had been given. Lundstrom and Lamont, on the other hand, took a more global view in their 82-item, six-point Likert-type "Consumer Discontent Scale," designed to measure the general state of consumer attitudes toward business (1976). Sample statements from the scale include "Business profits are too high"; "All business really wants to do is to make the most money it can"; and "The consumer is usually the least important consideration to most companies." Of course, there is an entire literature on the subject of consumer satisfaction/dissatisfaction, but not on the subject precisely as interpreted here.

Some preliminary ponderings on how to measure marketing's contribution to the "quality of life" are found in Reynolds and Barksdale (1978): Andreasen (1978) discusses shortcomings of indices such as sales, repeat purchasing, and expressions of consumer satisfaction as measures of health care quality, and recommends actual reports of problems as a preferable indicator. Bechtel (1978) explicates a life-quality satisfaction scale ("never" to "always satisfied") with respect to a number of product categories and marketing functions.

While the measurement attempts described above are intriguing and productive, there does appear to be considerable potential for improvement in quantifying the output side of consumer marketing efficiency. Product quality evaluations do not necessarily capture satisfaction experienced, and overall sentiment toward business, or even marketing, may be subject to invidious social biases. Surely a concept such as satisfaction, or utility, can be assigned a more precise valuation. This premise provides the basis for the following effort.

¹Henderson and Quandt (1971, p. 6) describe utility as "the satisfaction derived from consuming."

Conceptualization of a Measure

The case for a measure of consumer marketing efficiency rests on these tenets, which have been stated or implied:

- (1) Measurement of marketing efficiency constitutes an input-output, or cost-benefit, analysis.
- (2) Marketing input is comparatively quantifiable. Total sales or revenues are acceptable measures for this (from the consumer perspective), reflecting all costs of the marketing system including return to the entrepreneur, i.e., profit.
- (3) Since the objective of marketing is customer satisfaction, this specifies the system's output. Quantification of this dimension, when compared with the input, would yield an objective efficiency ratio highly consistent with the concept of social benefits in relation to costs.
- (4) Given the ambitiousness of such a measurement project, the most realistic procedure may be to examine the efficiency of the components of marketing, or individual markets. The present study, therefore, is limited to the efficiency of markets, specifically consumer product markets.

The essential, underlying metaphor for the conceptualized measure of consumer market efficiency is the financial concept of return on investment. The measure of "return" in consumer markets, or the "value received from consumption of a product category relative to the cost of consumption," therefore, can be defined as

Benefits/Costs
or Output/Input
or Satisfaction (Utility)/Expenditure (Total Sales)
or "Return"/Investment.

Taking the view of marketing's social purpose, consumer satisfaction/expenditure seems a valid expression of the concept, and is analogous to the financial measure of discounted net present value of cash flows/initial investment (Van Horne 1971, p. 60), i.e., the "profitability index." With the marketing measure, satisfaction and expenditure flows would simply be expected to occur in the same period.² More precisely, (Benefits - Costs)/Costs or (Satisfaction - Expenditure)/Expenditure would be the proper measure of return in consumer markets, as can be illustrated by the following discussion of the consumer exchange process.

Typically, a consumer purchase involves an amount of money exchanged for a product (good or service). For the exchange to occur, the consumer must value the product more than the money. That is, unless a greater value is attached to the object of purchase than is represented by its price, or the amount of money that must be given up for it, there is no incentive for the consumer to make the exchange. Symbolically,

$$V(P) > V(\$)$$

with $V(P)$ = value of the product and $V(\$)$ = value of the money.

For the purpose of defining a market efficiency measure, the amount of difference between $V(P)$ and $V(\$)$ is of importance. The algebraic difference $V(P) - V(\$)$ represents value, or benefit, provided by the product in excess of its cost. (This is a micro-representation of the concept known

²Products of long purchase-cycle, such as consumer durables, would pose only a slight conceptual problem here. Either a "discounted net present value of future satisfaction" would have to be determined to define the numerator, or the "period" would have to conform to the purchase- or product life-cycle. The denominator would then include all life-cycle costs à la Hutton and Wilkie (1980), rather than just initial expenditure.

in economics as "consumer surplus.") Identification of what this value is for any given exchange may be accomplished with the assistance of the consumer involved. Theoretically, a consumer would be willing to pay an amount approaching $V(P) - V(\$)$ for the privilege of obtaining $V(P)$ worth of value for only $V(\$)$. For example, if a consumer buys a product for \$10, he or she must value this product more than s/he values having the \$10. Say the subjective valuation of the object of purchase is \$15. Therefore, s/he should be willing to pay an amount very near \$5 to be able to exchange \$10 for \$15 in value. Provided consumers can make accurate estimates of such maximum acceptable transaction "fees," the ratio $V(P) - V(\$)/V(\$)$ can be obtained which would represent excess benefit, or excess satisfaction, in relation to expenditure (analogous to return on investment), and $V(P)/V(\$)$ would reflect total satisfaction per unit of expenditure, or an efficiency ratio of output/input. Aggregated across all transactions within a product class, an overall measure of market efficiency for that product would be derived. (Again it is stressed that this is a particular interpretation of "market efficiency," not resembling other definitions of efficient markets such as those in use in the fields of economics and finance.) The relative efficiencies of different product markets could then be compared. All that remains now is to generate an accurate monetary measure of consumer satisfaction in specific product markets to be compared with expenditure. This, of course, will be no small task.

Method and Results

Operationalization

As indicated, the fundamental purpose of this study is to develop a procedure for comparing the efficiency of various product markets on the basis of the inputs and outputs described in the previous section. This will involve estimating consumer satisfaction and expenditure associated with different products. As this is done, a means will be provided for the testing of the following hypothesis.

H: There are significant differences between different consumer product markets in terms of social efficiency provided (expressed as the monetized value of satisfaction relative to expenditure).

Confirmation of this hypothesis would actually be trivial. However, the rank ordering of different product markets on the basis of efficiency ratings could be highly revealing. Failure to confirm the hypothesis might be the most meaningful finding of all, suggestive of a kind of unanticipated equilibrium level of satisfaction per dollar across all product categories.

The principal problem to overcome in any such research effort remains the development of a means of establishing quantified or monetized values corresponding to consumer satisfaction. One imperfect attempt to accomplish this is summarized in the pilot study results reviewed in the remainder of this section.

The intention is to assign a value to the amount of satisfaction derived from a given market for a specified period. This value was estimated for the retail gasoline market by presenting the following hypothetical situation statement to a sample of consumer subjects (46 junior and senior marketing students at the University of Wisconsin--Madison) in written questionnaire form.

I want you to think about an imaginary situation. Suppose I am the all-powerful ruler of the United States, or some supreme world authority, and that I have the power to do anything I want. Suppose I am a very capricious ruler and that, for no reason at all, I decide to prevent you from buying gasoline for an entire month. Not only do I prevent you from buying gasoline, but I also prevent you from having your family or friends get it for you--in other words, I prevent you from obtaining gasoline in any way for a period of one month. I won't even let you use the gasoline you already have. Remember, since I am all-powerful, I can do this.

But imagine that, even though I rule the world, I am still very fond of money. In fact, if you pay me enough money, I will agree not to deprive you of gasoline for the one-month period. That is, I will let you purchase the right to continue buying gasoline.

Now think about what it would be like to do without gasoline for a whole month, and think about whether it would be unpleasant or difficult, or not so bad. What I want to know is: How much would you pay me not to keep you from having any gasoline for a whole month?

The estimate was also made for the beer and telephone service markets via these two questionnaire items which followed immediately:

Given the same conditions, how much would you pay me not to keep you from having any beer for a whole month?

How much would you pay me not to deprive you of telephone service for a whole month?

Accurate answers to these questions, if attainable, should represent a true valuation of the excess utility or satisfaction which consumers derive from the specified product market for the stated period, in this case, one month.³ In other words, consumer subjects would be expected to pay the "supreme authority" an amount up to, but not exceeding, their valuation of anticipated surplus benefit from participating in the market. (It was emphasized verbally to the subjects that the answer given should be the maximum amount, rather than an initial bargaining position.) As long as the question is understood and the responses are genuine, a monetary expression of excess consumer satisfaction for a product market should result, which then can be compared with expenditure. (And as long as the product class is a familiar staple, there should be no significant discrepancy between anticipated surplus benefit and actual benefit experienced. Indeed, the estimates of anticipated value are necessarily based on experience.) To determine efficiency (actually "return") ratios, satisfaction values expressed were compared with monthly expenditure levels obtained simply by asking subjects, through questionnaire items, how much they spend per month on the three given product categories (which was done subsequent to the satisfaction measurement to avoid any possibility of influencing that rather delicate response). Relative market efficiency, i.e., excess satisfaction/expenditure, was determined (for each subject) by comparing measures of return:

$$\frac{V(P)_g - V(\$)_g}{V(\$)_g} \geq \frac{V(P)_b - V(\$)_b}{V(\$)_b} \geq \frac{V(P)_t - V(\$)_t}{V(\$)_t}$$

with subscripts indicating gasoline, beer, and telephone service markets, respectively.⁴

These efficiency ratios, along with intra-subject rankings for the 25 students who participate in all three markets, i.e., purchase gasoline, beer, and telephone service, are presented in Table 1 (Method 1). Since utility is not directly comparable across individuals (Henderson and Quandt 1971, p. 255), intra-subject rankings were averaged for each product market to compute an aggregate measure of relative market efficiency. That is, differences between markets were identified by comparing median ranking (across consumers) for each product market. These values also appear in Table 1, suggesting telephone service to be the most efficient consumer market, as assessed by this method.

Although this hypothetical scenario measure may appear unrealistic and operationally non-viable at first (and possibly thereafter), a similar approach was demonstrated by Marquardt, et al. (1972) who, essentially, asked consumers the question, "How much would you be willing to sell your camper for?" Marquardt, et al. simply attempted to identify

TABLE 1

MARKET EFFICIENCY RATINGS (AND INTRA-SUBJECT RANKINGS)

Sub- ject	Efficiency Ratios (and Intra-Subject Rankings)						Likert Scores (and Rankings)		
	METHOD 1			METHOD 2			METHOD 3		
	Hypothetical Scenario			Hypothetical Scenario			Likert Scale		
	Gas	Beer	Phone	Gas	Beer	Phone	Gas	Beer	Phone
1	0(2½)	0(2½)	5(1)	3(1)	.1(3)	1(2)	22(3)	39(1)	25(2)
2	0(2½)	0(2½)	2.14(1)	1(2)	0(3)	7.1(1)	38(2)	31(3)	40(1)
3	4.7(2)	0(3)	40(1)	6(2)	1(3)	20(1)	46(1)	43(3)	45(2)
4	0(2)	0(2)	0(2)	0(2)	0(2)	0(2)	32(1½)	32(1½)	21(3)
5	.7(2)	.3(3)	6.25(1)	.1(2)	.03(3)	1.2(1)	26(2½)	29(1)	26(2½)
6	0(2½)	0(2½)	2(1)	.5(2)	0(3)	1.5(1)	25(3)	31(2)	41(1)
7	.6(2)	.2(3)	1.88(1)	.8(2)	1(3)	1.9(1)	37(3)	38(2)	42(1)
8	.8(2)	0(3)	2.5(1)	10(2)	0(3)	20(1)	38(2)	44(1)	34(3)
9	.4(3)	.5(2)	1(1)	5(2)	1.5(3)	6(1)	36(2)	42(1)	33(3)
10	.2(3)	.5(2)	.83(1)	1(3)	4(2)	6.7(1)	43(1)	39(2)	33(3)
11	5(1)	0(3)	2.22(2)	3(1)	0(3)	1.1(2)	28(3)	38(1)	31(2)
12	1.7(1)	0(3)	1.56(2)	7(1)	0(3)	3.1(2)	36(2)	39(1)	33(3)
13	1(2)	.7(3)	2.67(1)	33(2)	1.3(3)	133(1)	29(3)	41(2)	43(1)
14	.2(2)	0(3)	1.11(1)	.2(2)	0(3)	1.1(1)	33(2)	39(1)	27(3)
15	0(3)	.4(2)	1.33(1)	0(2½)	0(2½)	2(1)	35(1)	23(3)	27(2)
16	0(2½)	0(2½)	.5(1)	0(2½)	0(2½)	.5(1)	24(3)	47(1)	26(2)
17	.04(3)	.2(2)	2.5(1)	.8(2)	0(3)	3(1)	28(2)	33(1)	20(3)
18	3.1(1)	.4(3)	2(2)	3(1)	.4(3)	2(2)	31(3)	35(1)	34(2)
19	.4(2)	.8(1)	.2(3)	.4(2)	0(3)	4(1)	44(2)	32(3)	50(1)
20	1.2(2)	0(3)	7.67(1)	12(1)	4.4(2)	2.3(3)	20(3)	39(1)	22(2)
21	0(2½)	0(2½)	1.96(1)	2(1)	0(3)	.67(2)	44(1½)	33(3)	44(1½)
22	1.7(1)	.5(3)	.86(2)	3(1)	.25(3)	1.7(2)	26(3)	28(2)	38(1)
23	.5(1)	0(2½)	0(2½)	.5(1)	0(2½)	0(2½)	26(1)	24(3)	25(2)
24	2(1)	1(3)	1.67(2)	26(1)	2(3)	3.3(2)	33(2)	32(3)	34(1)
25	0(2½)	0(2½)	1.25(1)	3(2)	0(3)	15(1)	37(3)	39(2)	43(1)

Median Rank:

2	2.75	1	2	3	1	2	1.75	2
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fy the value necessary to be received before deprivation of a product would be accepted, instead of the price willing to be paid by the consumer to avoid deprivation. Naturally, the measure suggested in this paper (which is only intended as an operational starting point) could be recast in similar fashion. Consumers could be asked, in effect, "How much would I have to pay you to do without (product) for one month?"

The same idea, i.e., excess value received from consumption, is also illustrated by the quasi-experiment reported in Gaski (1986, p. 91, Exhibit).

Validation--Alternate Measures

Recognizing that the one-month time frame, or relatively imminent lifting of the hypothetical prohibition, might induce understatement of the satisfaction-valuation assessment, subjects were also asked, after a one-week time interval, to reply to an open-ended scenario featuring an indefinite prohibition and a monthly payment. (In other words, the students were asked how much they would pay per month to avoid the arbitrary prohibition "from now on," instead of "for an entire month.") Ratios generated by this approach, i.e., with new responses replacing the previous (Method 1) numerators, appear in Table 1 (Method 2). The median rankings indicate that, for this sample and measurement approach, telephone service consistently appears to provide the greatest amount of excess satisfaction per unit of expenditure, i.e., is the most efficient consumer market, followed by the gasoline and beer markets in that order. This finding, along with the Method 1 results, supports the hypothesis that there are observable differences in the satisfactions delivered by different markets. Of course, main testing effect is a possible concern here. That is, the initial questionnaire response may have affected the subsequent one following the week-long time lapse.

Also presented in Table 1 (Method 3) are the results of an 11-item, five-point Likert scale administered to the sample to measure attitudes toward each of the three markets of interest. Specifically, the construct to be captured was "value received in relation to cost," the same as with the hypothetical scenario method. (The actual scale items appear in Table 2.) That a different median ranking of markets emerges in this case suggests the hypothesis that consumers' subjective impressions of benefits obtained in the marketplace are at variance with what is indicated by a more precisely monetized form of measurement. Adverse national publicity regarding the oil and telephone industries could be a contributing explanation of this phenomenon. It may also be hypothesized that either, or both, basic measurement approaches have yielded invalid responses.

³Possible difficulties with the designated time-frame are dealt with later.

⁴It should be clear that responses, as "excess satisfaction" indices, represent the entire numerator, i.e., $V(P)_x - V(\$)_x$, as opposed to a component of it.

TABLE 2

LIKERT SCALE ITEMS

1. I get good value for my money when I buy (product).
2. The people who sell _____ are rip-off artists.
3. _____ costs too much.
4. The price I pay for _____ is about the same as the quality I receive.
5. I generally get what I expect when I buy _____.
6. Buying _____ is often a foolish waste of money.
7. _____ companies make too much money compared to what they do for consumers.
8. Most of the _____ I buy is overpriced.
9. _____ prices are reasonable given the high cost of doing business.
10. _____ companies take advantage of consumers by charging higher than normal prices.
11. I usually get my money's worth from _____.

(Some items adapted from Lundstrom and Lamont 1976.)

With three 11-item sets, the scales appeared as a 33-item instrument. Order of item presentation was random and mixed.

For clarity, minor rewording was necessary for some of the telephone service items. Where changes were needed, the items appeared as follows:

1. I get good value for my money when I use the telephone.
2. The people who run the telephone company are rip-off artists.
5. I generally get what I expect when I use the telephone.
6. Using the telephone is often a foolish waste of money.
7. The telephone company makes too much money compared to what it does
8. For the most part, telephone service is overpriced.
9. The price of telephone service is reasonable
10. The telephone company takes advantage of consumers

Concerning the validation issue, validity assessments are summarized in the multitrait-multimethod (MTMM) matrix presented as Table 3. Entries represent simple correlations between product-market rankings, across subjects. For Methods 1 and 2, convergent validity is moderately supported since the entries in the validity diagonal are considerably above zero ($r = .71, .27, .44$), although the correlation for the beer market is low.⁵ Discriminant validity is generally upheld because all entries in the validity diagonal are greater than those in the heterotrait-heteromethod triangles.

As anticipated, and as suggested by the divergence in median rankings revealed by the results in Table 1, there is low convergent validity between the Likert scale approach and each of the other two methods ($-.28 \leq r \leq .03$). Discriminant validity is also absent due to the observed low

⁵Concern over the relatively low coefficients may be mitigated by the realization that the total range of the variables used in the calculations was only a two-unit interval, i.e., rankings from 1 to 3. Furthermore, there is the familiar problem of attenuation caused by the use of ordinal data in correlation analysis.

TABLE 4

LIKERT SCALE RELIABILITY ANALYSIS AND PURIFICATION RESULTS

Item (from Table 2)	Pre-Purification Item-Total Correlation		
	Gas	Beer	Telephone
1	.79	.48*	.79
2	.73	.53*	.82
3	.70	.76	.68
4	.72	.58*	.80
5	.49*	.41*	.15*
6	-.04*	.73	.10*
7	.70	.80	.90
8	.85	.78	.88
9	.86	.65	.88
10	.73	.68	.87
11	.86	.82	.74
Pre-Purification α :	.879	.873	.908
Post-Purification α :	.923	.905	.948
No. of items Retained:	9	7	9

*Deleted in purification.

correlations in the Method 3 validity diagonals. Rather than indicating failure, however, this may simply be an artifact of the superior objectivity of Methods 1 and 2. Alternatively, these two methods may have been incapable of eliciting valid responses due to the nonrealism of the task.

No attempt was made to measure the reliability of the two hypothetical scenario tests, per se, but because of the similarity of these measures and the temporal interlude involved, the Method 1-2 validity diagonal may be interpreted as a quasi-test-retest reliability estimate. Cronbach's coefficients alpha for the three Likert scales were calculated following scale purification, and appear in the reliability diagonal for Method 3. Table 4 summarizes the reliability analysis for the Likert scales. The scales were purified by deletion of items with item-to-total correlations of less than .65. It was these trimmed, purified scales which were employed in the MTMM validation analysis. According to the obtained results, the reliability of the Likert scale measures would have to be considered superior.

Discussion

Overall, the results of the validation study raise as many questions as they answer, but such is a legitimate purpose of exploratory research (Churchill 1976, pp. 62-3). The hypothetical scenario measures can be considered to have demonstrated, at best, moderate validity according to the MTMM approach, while the Likert scales were found to

TABLE 3

MULTITRAIT (MULTIMARKET)-MULTIMETHOD MATRIX

	METHOD 1 Hypothetical			METHOD 2 Hypothetical/Open-end			METHOD 3 Likert Scale		
	Gas	Beer	Phone	Gas	Beer	Phone	Gas	Beer	Phone
METHOD 1 Hypothetical	Gas	Beer	Phone	Gas	Beer	Phone	Gas	Beer	Phone
		-.12							
			-.05						
		-.69							
METHOD 2 Hypothetical/ Open-end	Gas	Beer	Phone	Gas	Beer	Phone	Gas	Beer	Phone
		.71	-.43						
			-.27						
		-.18							
			-.26						
		-.59							
METHOD 3 Likert Scale	Gas	Beer	Phone	Gas	Beer	Phone	Gas	Beer	Phone
		-.20	.38						
			-.27						
		.01							
			-.07						
		.17							

exhibit very high reliability but no evidence of validity. The convergent validity of the hypothetical measures (Methods 1 and 2) may yet be an artifact of testing effect, and the lack of convergence associated with the Likert measure may be attributable to the non-validity of the other measures as well as itself.

One step toward answering the remaining questions about the two basic measurement techniques reviewed here will occur when they are triangulated with a third approach, which is to be the next phase of this research project. A conjoint measurement approach is planned (Luce and Tukey 1964, Green and Rao 1971). Analogous to the common practice of estimating attribute utilities by presenting subjects with choices among various combinations of attributes, different combinations of product classes will be presented in order to estimate the utility of each.

At this point, some unanswered conceptual questions should be addressed. First of all, is total consumer monetary expenditure the appropriate measure of marketing input? It can be argued that the consumer's time and effort should also be included in the investment base (Hollander 1961). So, might the market efficiency ratio be inflated by not including non-monetary expenditure in the denominator?

In response to this, it will be acknowledged that there is, indeed, a non-monetary aspect to marketing input. However, this time and effort expenditure can be regarded either favorably or unfavorably by consumers, i.e., as either a benefit or a cost, because, for instance, some people like to shop (Hollander 1961). Therefore, it is suggested that, depending on whether this aspect is evaluated positively or negatively, it will be manifested in the proposed efficiency measure as an implicit addition to or deduction from the satisfaction value.

Another potential objection concerns the impact of effort on expectancy and, in turn, satisfaction. For example, increased effort, financial or otherwise, may raise expectations and, therefore, influence product evaluation (satisfaction) upward or downward upon disconfirmation, depending on the operative psychological model: assimilation, contrast, generalized negativity, etc. (Anderson 1973, Cardozo 1965). Will such a condition confound the relationship between the components of the market efficiency ratio? Possibly, but it should be recognized that the relationship of interest is between actual marketing costs and actual benefits. The measure assumes that expenditure level affects satisfaction. (For example, an extremely high or exorbitant monthly expenditure level would certainly decrease the amount a consumer would be willing to pay for the privilege of continuing to spend that money. In other words, excessively high prices impact upon satisfaction. This does allow a two-fold, or magnified, effect on the market efficiency ratio, which simply makes the measure volatile with respect to price changes.) If these costs also influence satisfaction through the intermediation of expectancy, this is simply another manner in which marketing input impinges upon consumer well-being, accounted for by the measure, but unnecessary to control.

The classes of products selected for empirical consideration may also be significant. A comparison between vital necessities, or products which are required for basic physiological survival, with discretionary products, for example, may not be valid. It could be argued that urgently needed products would be deserving of the enormous satisfaction values they would be expected to receive because of the priceless needs they fulfill at finite costs, but for purposes of realistic comparison it appears prudent to consider only nonessential, although valued, products. Consumer convenience products, such as those examined in this study, would seem to be viable candidates.

Also, it has occasionally been implied in this paper that the efficiency construct considered here is tantamount to social efficiency, in the sense of fulfilling the social mission of consumer marketing by providing efficient customer satisfaction. In other words, efficiency has been defined only from the standpoint of the customers in a particular market, ignoring the clear possibility of external-

ities impacting on the larger society. (For instance, producers of goods which satisfy their customers very efficiently might also be discharging pollution into the environment.) All this is acknowledged; but since the nature and magnitude of externalities may be so difficult to assess, the approach in this paper is offered as a substantial enough starting point. Surely, efficient consumer satisfaction represents a large part of the domain of the social efficiency of consumer marketing.

Conclusion

The preceding has

- described how the issue of consumer marketing efficiency can be reduced (at least at a product/market level) to one of value delivered to consumers relative to product cost;
- suggested several approaches to initial operationalization of the construct;
- developed preliminary evidence of the reliability and validity of particular measures; and
- addressed some potential difficulties associated with the procedures.

Considering the significance of the issue to many audiences--marketing researchers and practitioners, consumer researchers and advocates, consumers themselves, and public policy-makers--and the scarcity of attention it has received, the modest aim of this paper has been to regenerate conceptual and empirical interest in this vital matter. A foreseeable outcome of this type of project might be the more accurate targeting of public policy and consumer lobby efforts, that is, the focusing of attention on less efficient markets. (Of course, future research should employ nationally representative samples of consumers, rather than the convenience sample used here.) Actually, it may not be at all extreme to suggest that identifying the social performance of consumer marketing, in the sense of individual product markets (i.e., industries) delivering value to consumers efficiently, may be one of the highest aims of consumer research.

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Abstract

Decision making is dependent on the information inventory that consumers build up, and the study of information gathering becomes critical in understanding final choice behavior. This paper presents a meaningful conceptualization of a model of external search for information. The cost-benefit framework is enriched with the addition of prior beliefs and perceived risk. Individual differences, such as knowledge, experience, involvement and goal-orientation have been included in the explanatory model. The model is validated empirically, using path analysis.

Introduction

Every individual is constantly being exposed to information stimuli from a variety of sources, including personal and non-personal sources. Due to processing capacity limitations (Miller 1956; Bettman 1979) and selective perception (Engel, Kollat and Blackwell 1982), only a part of the information one is exposed to is actually digested and stored in memory. The information inventory that an individual builds up is critical because any choice is dependent on this data-base. The assumption of full information made in studies using the multi-attribute model or multi-dimensional analysis is not strictly true.

For non-durables, it may be sufficient for a consumer to recall information that has been previously stored in memory (internal search); in the case of durables, a consumer would more likely find internal search to be inadequate and hence may engage in external search. The study of external search, which is easier to observe, provides a researcher with an opportunity to understand the building up or revision of the information inventory that precedes the final decision. The objective of this investigation is to posit a model of external search behavior and empirically validate it.

Automobiles have been chosen as the product class for this study because (i) it is an important purchase, accounting a sizeable portion of an individual's income (ii) it is so ubiquitous and there are a variety of sources for information, and (iii) a number of earlier studies have shown a large variance in the search behavior for information, with a sizeable proportion not engaging in extensive search (Newman 1977).

Previous Relevant Literature

The economic and psychological perspectives found in the marketing literature are reviewed briefly.

The economic approach to search behavior, concentrating on the cost-benefit framework provides a parsimonious and meaningful framework to investigate search behavior. The optimum amount of search can be arrived at by equating expected marginal returns of search to the expected marginal costs of search. Being ignorant has a penalty and reducing ignorance comes only at a cost. Taking price alone, Stigler (1961) algebraically showed that the expected diminishing returns of search accounts for search to be quite limited. Taking real prices of refrigerators, a monetary value of the "welfare loss" (difference between the utilities of the best alternative and the chosen alternative) points to the same conclusion - a limited amount of search is sufficient to obtain the lowest price

in the market - about four alternatives (Ratchford 1980). The main drawback of the economic approach is its exclusive concentration on purely monetary costs and monetary returns, with the psychological costs and benefits being neglected.

The cost-benefit framework has been expanded to include risk (Meyer 1982) but a restricting assumption of search occurring only across brands distracts from its usefulness. Considering a Bayesian approach, the Expected Value of Sample Information (EVSI) model concentrates on successive information bits available for processing (Hagerty and Aaker 1984). Besides being myopic, the EVSI model works best only when there is homogeneity in attribute perceptions and attribute weights.

Turning to the traditional psychological approach to search behavior, the motivational approach is well established (Howard and Sheth 1969; EKB 1982). Motivation is viewed as providing the drive for any activity. One aspect of motivation is involvement. The higher the involvement, the higher would be the propensity to engage in activities related to the concerned product class. Another psychological dimension that accounts for heterogeneity amongst consumers is the differential goal-orientation. Consumers faced with the same market environment would search differentially not only because the costs of search are different, but also the strategy chosen for making a choice may vary - whether the goal is to satisfy or optimize (Wright 1975). A satisficing objective would require a less thorough search than an optimizing objective.

The information processing approach (Bettman 1979; Sternthal and Craig 1982) lays stress on the processing capacity limitations and also deals with internal search more extensively. Familiarity and experience are constructs that relate to information that has been previously acquired and stored. The relationship of familiarity to search has been ambiguous - positive, negative, no influence, or an inverted U (Katona and Mueller 1955; Newman & Staelin 1972; Bettman & Park 1980; Moore & Lehmann 1980; Punj & Staelin 1983; Johnson & Russo 1984; Brucks 1985). The positive effect can be understood to be due to the facilitating influence of prior knowledge on the understanding of new information; the negative effect can be understood to be due to the efficiency influence on the processing of new information i.e. knowledgeable consumers selectively gather only relevant information, like a chess expert knowing the right moves. The effect of positive experience on search has been found to be negative when the previous purchase has been satisfactory - leading to the repeat purchase behavior or loyalty (Swan 1969). Empirical studies have typically dealt with univariate or bivariate analysis or typologies of search segments (Katona and Mueller 1955; Dommermuth 1965; Udell 1966; Bennett and Mandell 1969; May 1969; Claxton Fry and Portis 1974; Westbrook and Fornell 1979; Kiel and Layton 1981; Duncan and Olshavsky 1982; Furse, Punj and Stewart 1984). In multivariate analysis, the relationships diminish or disappear (Newman and Staelin 1971; 1972).

The Punj-Staelin Study

A major gap that the literature presents is the absence of any explanatory model to explain the differences in the

amount of external search. A previous attempt (Punj and Staelin 1983) to build an explanatory model leaves much room for improvement. That particular study provides a reliable measure of the amount of external search, which has been arbitrary in earlier studies. The authors themselves state that "(the findings) indicate that the model of consumer information search process, although capturing some important aspects of the process, still ignores numerous factors concerning search behavior. Thus the problem seems to be one of developing better model specification ...". This study seeks to develop an improved explanatory model of external search behavior by re-examining the constructs and linkages and by positing some important missing constructs.

* Cost Savings has been used as a benefit accruing from search: A better construct would be the use of perceived benefits as an antecedant to search itself. What happens after the search would be less useful than the effect that the expectation of cost savings has on the search process, when the objective is to explain search behavior. Perceived benefits (which are expected) is an antecedant to search and fits very well in the cost-benefit framework.

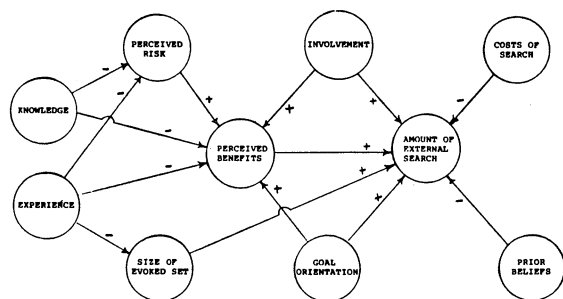
* Size of the feasible set was used. Not every available alternative is considered for evaluation even if it is feasible. Typically, the size of the considered alternatives is small (Newman 1977); the size of the evoked set would be a better construct, because this reflects the self-imposed restrictions of the individual.

* Perceived risk theory (Bauer 1960) deals with the uncertainty in choice situations, which is characteristic of the pre-purchase process, especially for durables. Risk reduction is a benefit resulting from search and hence risk is an antecedant of the perceived benefits. The greater the perceived risk, the greater would be the perceived benefits expected by searching for information.

* Prior beliefs about the marketplace: If there is no perceived heterogeneity in the product offerings or the environment is not changing much, then the amount of search need not be high. However, if the market is perceived as volatile or changing, the internal search would be less useful and external search would be enhanced. Alternative limiting prior beliefs have a significant impact on the amount of external search (Duncan and Olshavsky 1982).

FIGURE A
MODEL OF EXTERNAL SEARCH

Figure A depicts the proposed model of external search.



The exogenous constructs are costs of search, degree of involvement, goal-orientation, experience, prior knowledge and prior beliefs. The endogenous constructs are the perceived risk, perceived benefits of search, size of the

evoked set and the amount of external search.

Essentially, it is an enrichment of the cost-benefit framework. Costs will affect search negatively and perceived benefits will influence it positively. The size of the evoked set, the goal-orientation (measured as the need to do a thorough job), and involvement affect search positively whereas alternative limiting beliefs influences it negatively. Perceived risk would be diminished by greater familiarity and enhanced by the goal orientation and involvement. Similarly, perceived benefits would be positively affected by perceived risk, involvement and goal orientation and negatively by familiarity.

Research Design

Sample:

Questionnaires were mailed out to participants in a panel study. The main decision-maker in the household was requested to complete the questionnaire if he/she had purchased a car within the previous twelve months. Otherwise, they were requested to pass the questionnaire along to a friend who had purchased a car within the specified time frame. The subject was asked to consider himself/herself in a new car purchasing situation and responded to Likert-type (seven point scale) statements. The total number of usable responses was 129. The survey was conducted in Dec. 1985/Jan. 1986.

Measures:

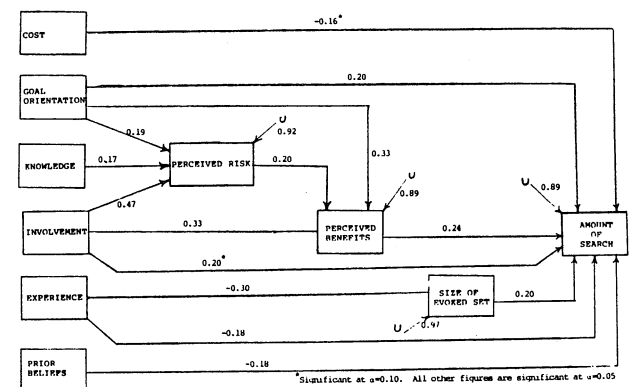
Multiple items were used to measure each construct, except the size of the evoked set. The reliability of the scales is shown in Table 1.

TABLE 1
RELIABILITY OF SCALES

Scale	# of items	Cronbach Alpha
1. Amount of Search	6	0.83
2. Perceived Benefits	4	0.61
3. Costs of Search	6	0.72
4. Involvement	3	0.74
5. Goal Orientation	6	0.72
6. Knowledge	3	0.86
7. Experience	11	0.95
8. Prior Beliefs	6	0.60

Perceived risk had only two items; The correlation between the two was 0.41. The size of the evoked set was a single item measure; the mean was 4.0 and std. dev. was 2.5.

FIGURE B
PATH MODEL OF AMOUNT OF SEARCH FOR INFORMATION



Analysis:

A path analysis was run using cost, experience, knowledge, involvement, and prior beliefs as the exogenous variables. The order of entry of the endogenous variables was as follows: perceived risk; perceived benefits; size of the evoked set. The dependent variable was the amount of external search. The validated path model is shown in Figure B; the computing schedule is shown in Table 2 and the correlational analysis in Table 3.

TABLE 2
COMPUTING SCHEDULE FOR PATH ANALYSIS
(with six exogenous and four endogenous variables)

Dependent Variable = Amount of Search	Independent Variables = 1 thru 6 1 thru 7 1 thru 8 1 thru 9					zero-order correlation
Exogenous variables:						
1. Involvement	0.34	0.34	0.26	0.20*	0.48	
2. Knowledge	0.11	0.11	0.09	0.08	0.21	
3. Prior Beliefs	- 0.17	- 0.17	- 0.18	- 0.18	- 0.17	
4. Experience	- 0.26	- 0.26	- 0.24	- 0.18	- 0.09*	
5. Cost	- 0.21	- 0.21	- 0.18	- 0.16*	- 0.18	
6. Goal Orientation	0.27	0.27	0.21	0.23	0.40	
Endogenous variables:						
7. Perceived Risk	-	0.00	0.00	0.00	0.35	
8. Perceived Benefit	-	-	0.25	0.24	0.51	
9. Size of the evoked set	-	-	-	0.20	0.35	

R² in the final equation = 0.453

1 - r² = 0.79

* denotes significant at 0.10
Other figures are significant at 0.05

TABLE 3
ANALYSIS OF CORRELATIONS OF AMOUNT OF SEARCH WITH

with	1.Involv	2.Know	3.Belief	4.Exper	5.Cost
TOTAL CAUSAL	0.34	(0.11)	- 0.17	- 0.26	- 0.21
DIRECT CAUSAL	0.20	(0.08)	- 0.18	- 0.18	- 0.16
INDIRECT CAUSAL	0.14	0.03	0.01	- 0.08	- 0.05
via Risk	0.00	0.00	0.00	0.00	0.00
via Benefit	0.08	0.02	0.01	- 0.02	- 0.03
via Size	0.06	0.01	0.00	- 0.06	- 0.02
NON-CAUSAL or Spurious	0.14	0.10	0.00	0.17	0.03
TOTAL RELATIONSHIP	0.48	0.21	- 0.17	- 0.09	- 0.18

() denotes not significant
Other figures are significant at alpha = 0.05

Discussion of the Results:

The measures used for the various constructs have moderate to high reliabilities, ranging from 0.60 to 0.95. These scales are an improvement over measures used in earlier studies. In path analysis, the assumption has to be made that the variables are measured without error, in addition to the other usual assumptions of regression analysis. The reliabilities obtained show that measurement error, if any, would not vitiate the results. Also, using 129 subjects and 10 variables, (ratio of 13:1), lends stability to the regression co-efficients..

The path analysis results support the cost-benefit framework. The perceived benefits of search has a positive influence and costs exerts a negative influence on the amount of external search conducted. Involvement and goal orientation have a positive impact on perceived risk, perceived benefits and the amount of external search. These were all expected, except goal orientation affecting perceived risk. Perceived risk was not related to experience as was hypothesized and knowledge affected risk positively instead of negatively. The reason for this may be

any of the following:

- i) the measure of risk is inadequate
- ii) subjects are over-stating the riskiness to corroborate or enhance their own self-image to be congruent with knowledge
- iii) this is a tricky situation where greater knowledge increases the perceived risk. An analogy is the complexity perceived by consumer researchers in any decision making process, whereas in actual situations, an individual goes through many purchase decisions with relative ease.
- iv) the facilitating explanation may be holding true

Maybe each of the above is contributing to the observed positive relationship between knowledge and risk. This must remain a speculation until a follow-up study using a better measure of risk is completed.

The size of the evoked set positively affects the amount of search and positive experience with the previous automobile reduces the size of the evoked set. In addition, positive experience directly affects the amount of search negatively, thereby confirming the importance of experiential knowledge. Prior beliefs were posited to negatively affect the amount of search and this was also supported.

Examining Table 3, it can be seen that the total causal relationship is direct in the case of perceived benefits, size and belief and slightly less so in the case of cost, experience and goal orientation. Risk performed very poorly; and the measure remains a drawback.

Summary

The cost-benefit framework is useful for examining the external search behavior. In addition to prior beliefs, the goal orientation, involvement, the self-limitation of size of the evoked set and experience have a significant impact.

Limitations of the Study

The sample was not comprised just of new car buyers and the amount of forgetting is not certain. The only known fact is that every respondent had purchased a car in the previous year. Also, the sample was not a strictly random one.

One cannot confirm true causality through a cross-sectional analysis but the selection of the variables and the order of entry of the endogenous variables is meaningful and hence the path analysis appears to be reasonably valid. This is a preliminary study and a follow-up investigation using the validated scales is planned. Also a larger sample size and less restrictive analysis would throw more light on this important phenomenon.

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Abstract

Scholars have long studied the organizational buying process using either an adoption process framework or a buying model framework. This paper merges these two frameworks into a single model of organizational buying.

Introduction

Scholars have long studied the industrial adoption process without considering it as part of the normal buying process of the organization. When a product or service is new to the organization its acquisition can be viewed as a new task buying process or as an adoption process. These two general models of purchasing observe the same phenomena but label and classify them into different categories. The objective of this paper is to develop a model that encompasses the constructs of both the adoption model and the organizational buying model.

The relevant literature is briefly reviewed as background to the development of a model which merges concepts from both approaches. A sample set of research propositions is developed for part of the merged model.

Organizational Buying Models

The number of complex organizational buying models that purport to describe the process by which an organization acquires products or services is large. They range from Webster's (1965) simple four stage model to the more complex models of Sheth (1973) and Webster and Wind (1972). Both the Sheth and Webster and Wind models incorporate a broad spectrum of buying determinants within a stimulus response format. Webster and Wind point out that their model, "does not claim to know what is the exact decision-making process. Instead, the model presents a major set of variables (blocks) that marketing personnel should identify in their attempt to understand buying behavior (p. 39)." The Sheth model goes beyond the building block stage to hypothesize interrelationships between large number of variables in a flow chart format. It is loosely structured with much of the model untestable in its present form. Nevertheless, it does pull together and integrate the literature in the field into a logical causal model that is a starting point for understanding organizational buying behavior.

The Buygrid model (Robinson, Faris and Wind 1967) (Figure 1) is probably the best known of all the models being described in most basic marketing textbooks. The model was developed from a descriptive study that observed a large number of purchases by three firms.

The authors expanded Webster's (1965) four stage model to an eight stage model of the organizational buying process. They also noted that the buying process varies over three different buying task situations:

- a) new task where the purchase situation is completely new to the organization,
- b) modified rebuy where the organization has some experience in purchasing the product or service, and
- c) straight rebuy where the buying situation is a reordering of previously purchased products or services.

The new task situation is akin to an adoption process situation in that the organization has no experience in buying the goods or services as is the case in the adoption of a new product or service.

FIGURE 1

THE BUYGRID MODEL

STAGES OF THE BUYING PROCESS (BUYPHASES)	BUYING SITUATIONS (BUYCLASSES)		
	New task	Modified rebuy	Straight rebuy
1. Problem recognition			
2. General need description			
3. Product specification			
4. Supplier search			
5. Proposal solicitation			
6. Supplier selection			
7. Order routine specification			
8. Performance review			

Source: Adapted from Patrick J. Robinson, Charles W. Faris, and Yoram Wind, *Industrial Buying and Creative Marketing* (Boston: Allyn & Bacon, 1967), p. 14.

Because the Buygrid is the most widely accepted of all process models it will be used in this paper as the starting point for the development of the merged model. There is nothing magic about the number of stages in an organizational buying model as they have ranged from four stages (Webster 1965) to six stages, Granbois (1963) to eleven stages (Grashof and Thomas 1976). Ghingold (1985, pp. 76-85) presents an excellent summary of the literature dealing with the steps, stages, phases or subdecisions in the organizational buying process. What is of importance is that all of these process models begin with the problem recognition phase. The models then proceed through whatever number of stages to the choice and post choice evaluation stages. The merging of the problem recognition stage with the adoption process literature is the focus of the remainder of the paper.

Adoption Process Models

Like the organizational buying process, the adoption process has been conceptualized as having a number of stages. The rural sociology literature in the mid-1950s generally described the adoption process as having five stages:

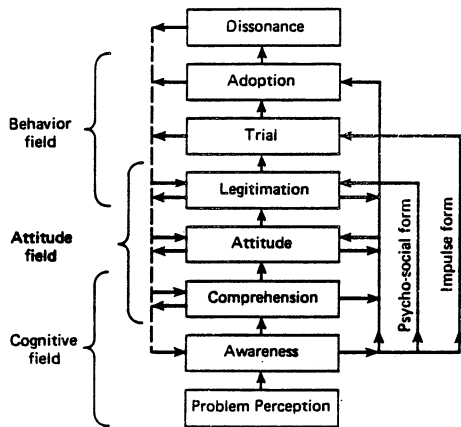
- 1. Awareness - The individual knows of the product or idea but lacks sufficient information about it.
- 2. Interest - The person seeks more information.
- 3. Evaluation - The individual mentally tries the product or idea to decide whether to physically try it or not.
- 4. Trial - The individual makes a small scale trial of the idea or product.
- 5. Adoption - The individual adopts the idea or product.

This adoption model is probably the most widely known and is quoted in most basic marketing texts. Like organizational buying models it makes sense in the abstract, but requires modification if it is to enrich our understanding of the adoption/buying process.

Two conceptualizations of the adoption process are of interest to this paper. Robertson (1971) suggested the model depicted in Figure 2. He suggests that there are various forms of this model with the rational/decision-making form following the full sequence of stages and the nonrational/impulse form going from awareness to trial. He added the problem perception and dissonance stages to more fully account for all possible sequences that could occur.

FIGURE 2

A SUMMARY ADOPTION MODEL



The addition of these two stages brings this model more in line with the conceptualization of new task organizational buying models. Robertson sees the role of problem perception as being the motivator that generates search behavior which results in the identification of the innovation alternative. Dissonance can be related to the post purchase evaluation stage in organizational buying models.

Although the labels are different, the main Robertson's model is an enriched version of the basic adoption model. It is basically a consumer buying model and not an organizational buying model.

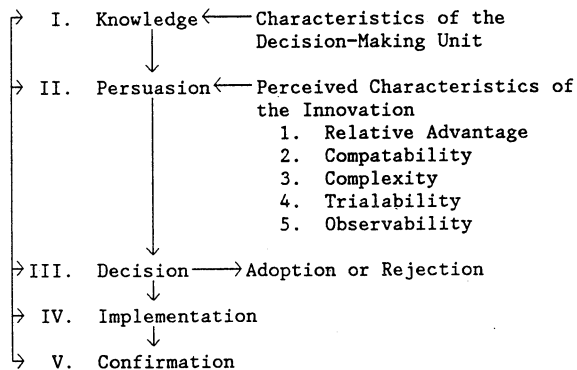
The second model of interest is Roger's (1983) model of the stages in the innovation-decision process (Figure 3). The knowledge stages occur when the individual or the decision-making unit (DMU) becomes aware of the innovation and how it functions. Persuasion is the formation of a favorable attitude towards the innovation.

FIGURE 3

A MODEL OF STAGES IN THE INNOVATION-DECISION PROCESS

Prior Conditions:

1. Previous Practice
2. Felt/Needs Problems
3. Innovativeness
4. Norms of the Social Systems



Source: Adopted from Rogers, Everett M. (1983), *Diffusion of Innovations*, 3rd ed., New York: The Free Press, p. 165.

Decision occurs when the individual or DMU engages in the activities that lead to adoption or rejection of the innovation. This stage is akin to the organizational buying process.

Implementation involves using the innovation. Confirmation is the seeking of reinforcement of an innovation-decision already made. Confirmation is analogous to Robertson's dissonance stage or the organizational buying model stage of post-decision evaluation.

Roger's (1983) also has a model of the innovation process in organizations but it is at such a macro level so as to be of little use for this paper.

Merging the Models

Ozanne and Churchill (1981) attempted to conceptualize the organizational buying process as an adoption process. They examined process activating factors, purchase directing factors, duration of process and the use of information sources. They concluded that, "the industrial adoption process is exceedingly complex, far more so than the individual's adoption process (1971, p. 327)." This conclusion, which is logical and intuitively obvious, could have been made without the benefit of the study. The study perhaps was too ambitious as none of the explanatory variables produced any statistically significant results.

The review of the buying and adoption literature leads one to conclude that a simple application of the basic adoption model is not appropriate for the study of new product/new idea adoption by organizations.

The model described in Figure 4 is a composite of the Robertson model, the Buygrid model and an attribute model of organizational buyer choice (Wilson and Lichtenthal 1985). Two forms of the model are required to account for buying center activity. Some firms are much more active in the scanning of the environment for new ideas or products that will improve their organization's competitiveness. In the active organizations, its likely that the stakeholders (Patchen 1963) become aware and comprehend a new product or idea before the buying process is initiated by the problem recognition stage. It is likely that these stakeholders become advocates of the new idea or process and try to initialize the buying process within the organization.

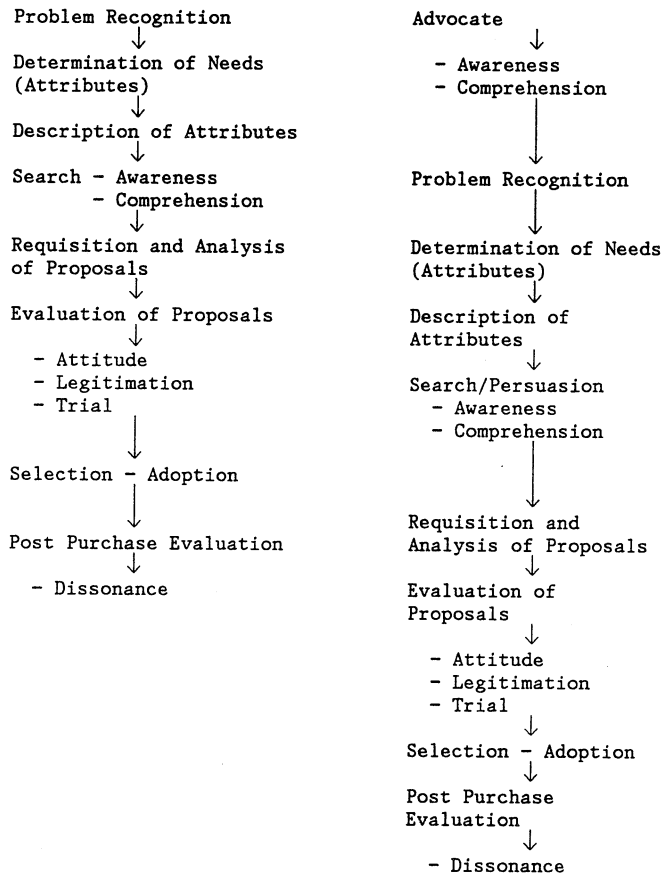
The second point of departure from traditional models is that needs are conceptualized as being represented by bundle of attributes that are product/service related, supplier company related and salesperson related. In other words, it is possible to describe and specify the buying situation in terms of this set of attributes. This conceptualization allows us to draw upon attitude theory as we model the adoption/decision process.

The third point of departure is that Robertson's adoption model is nested within the organizational buying model. For example, in the passive model, awareness and comprehension are the result of search. Search is the activity and awareness and comprehension are the results. Similarly the evaluation of proposals describes an activity where the outcomes are an attitude structure based upon the attributes of the purchase. This attitude structure leads to the legitimization stage where the buying of the new product or idea seems to be an appropriate course of action. This leads to trial which helps evaluate the product or idea.

The selection/adoption process is determined by the attitude based upon the total bundle of attributes. What makes the organizational buying/adoption process so complex is that this attitude is really a summary of the individual members buying center attitudes. There is a need to develop a methodology of integrating the attitude structures of the buying center. The operative attitude that moves a product/idea through legitimization to trial to selection/adoption is dependent on the influence relationships within the buying center.

FIGURE 4

MERGED MODEL OF THE ORGANIZATIONAL BUYING/ADOPTION PROCESS FOR NEW PRODUCTS OR IDEAS



The post decision evaluation is the same as dissonance and confirmation in the adoption models.

Summary

Research in the organizational adoption process needs to be based upon constructs from both the adoption-innovation literature and the organizational buying behavior literature. This paper indulges in some "re-invention" (Rogers 1983, p. 17) in trying to merge these two schools of thought into a single model.

It is possible to begin to generate a number of testable propositions based upon the merged model. For example, the following propositions are based upon the active/passive buying center concept.

- Proposition 1. Active buying centers become aware of a new product before passive buying centers.
- Proposition 2. Members of active buying centers achieve awareness and comprehension before a problem is defined.
- Proposition 3. Members of passive buying centers achieve awareness and comprehension after a problem is defined.
- Proposition 4. Stakeholders are more likely to be environmental scanners in active buying centers than other members.
- Proposition 5. The advocate in the active buying center will make other members of the buying center aware and achieve comprehension in the search/persuasion stage.

As this example illustrates, a large number of propositions can be developed to help explore the merged model.

Although the merged model is not totally new in concept it provides a richer understanding of how new products or ideas are purchased by organizations than either of the models by itself. It is a synergistic merging in that the insight of this model is greater than the sum of its parts.

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INDUSTRIAL BUYING BEHAVIOR: JAPAN VERSUS THE U.S.

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Abstract

This paper presents a complex conceptual model of Japanese industrial buying behavior and contrasts that behavior with similar activities in the U.S. The most striking differences seem to be in the unique ways Japanese firms organize buying and selling centers and the interactions that take place between firms, often developing into networks.

Introduction

Since the end of World War II, the growth rate of the Japanese economy has been unusually rapid. During this time period, Japanese companies re-established themselves, modernized their physical plant, and basically closed the technological gap with advanced Western economies. This accomplishment involved the purchase of foreign technology, heavy investment in new facilities, continuous increases in productivity, and the shift of half of Japan's population from the agricultural sector to the industrial and services sectors (Vogel 1975).

Prior to World War II, Japanese products were considered to be cheaply made and of inferior quality; now, much to the contrary, they are admired by their customers all over the world. In fact, Japan is now the second largest economic power in the world. Thus, Japan's economic growth has been accompanied by the expanding scale of its foreign trade. In 1981, Japan's share in the world trade of developed industrial countries was 12.4% for exports and 11.1% for imports (JETRO 1982). Today it is even greater.

This remarkable economic growth and industrialization has often been credited to an even more remarkable set of factors concerning the Japanese cultural, political business environments. From Theory Z (Ouchi and Jaeger 1978) to Theory F (Kotkin and Kishimoto 1986), a number of explanations have been developed to explain the success of Japanese corporations and their society overall. For instance:

... business has carefully developed management practices that fully exploit Japanese traditions of absolute loyalty to the emperor (translated in business terms to the superior and the company), compensation based on age and seniority, and a guarantee of lifetime support (translated from the feudal system of lord of the manor and his obligation to support his vassals) (Sethi 1975, p.4).

While most of these explanations contain elements of truth, they are limited in their overall explanatory power and usefulness. More recently, in contrast to single-factor or limited explanations, an attempt has been made to understand the Japanese success as the result of a complex interplay of factors (e.g. Kotler, Fahey, and Jatusripitak 1985). Still, very little of the research and writing on the Japanese industrial model is empirically based. More often, the basis for speculation and theory is individual experience and/or limited observations of the Japanese economy.

This paper presents a complex conceptual model capable of identifying and synthesizing the numerous variables believed to influence Japan's economic growth and industrial marketing success. Buyer/seller relationships are the central focus of this paper. The marketing and purchasing of industrial goods in Japan is studied using the interaction approach, developed by Bonoma and Johnston (1978) and extended in Johnston and McQuiston (1984). It is hypothesized that much of Japanese corporations' success is due to their unique approach to industrial buying and selling manifested in

strong buyer/seller relationships. In addition to strengthening the conceptual model of Japanese industrial marketing behavior it is also an aim of this paper to contrast that behavior, where possible, with U.S. firms. Finally, it is hoped that this conceptual improvement will be the precursor of increased empirical efforts. Since hundreds of books and thousands of articles have been written on the Japanese economy, a complete review and synthesis is not within the scope of this paper.

Background

The exchange of industrial marketing developed by Bonoma and Johnston (1978) argued for the use of the buyer/seller dyad as the smallest unit of analysis in marketing. Their model was built upon five major types of dyadic relations inherent in the industrial marketing process.

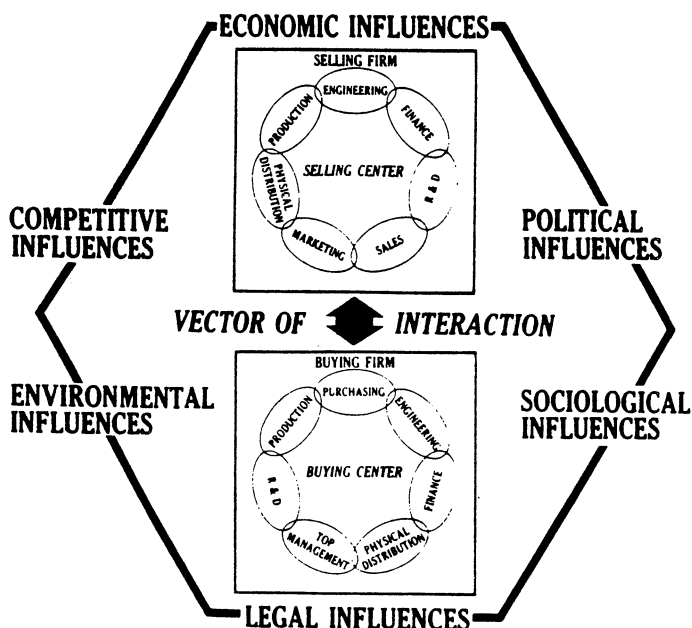
- The sales representative-purchasing agent relationship in which information and help in problem solving are exchanged by the seller for credit for the specific sale with the buyer.
- The sales representative-selling firm relationship in which sales efforts are exchanged for money in the form of a commission or salary.
- The purchasing agent-buying firm relationship in which talents and abilities for buying and problem solving are exchanged for money, usually a salary.
- The organization-to-organization exchange or interorganizational relationship in which goods and services are exchanged for money or credit.
- The complex exchange of information, interaction in negotiations, and mutual image building in which all four parties, and mutual image building in which all four parties establish relations with each other. These relations establish the boundaries of the purchasing interaction.

This application of exchange theory to industrial marketing was relatively straightforward. Representatives of the two organized behavior systems interacted in an attempt to gain the necessary resources for the survival of their respective organizations. In the interorganizational dyad, on one side was the buyer attempting to gain the raw materials, component parts, etc., necessary for the continuation of his stated function and the ongoing processes of the firm; on the other side was the seller, attempting to gain the necessary sales quotas to provide the financial resources to ensure continued operation of his organization. This interaction represented the primary characteristic of industrial marketing. Johnston and McQuiston (1984) extended this conceptualization via their Interactive Exchange Model (IEM). They felt what was needed was a framework that not only modeled the interaction between the two organized behavior systems but outlined the resource dependency perspective of the internal and external coalitions that are present on both sides of the dyadic transaction and impact upon the interaction. This model also incorporated the constraints of the larger macro environment in which the exchange occurs.

The Interactive Exchange Model captured a number of important components of the industrial transaction:

- The interdependency of the coalitions on each side of the dyad that compose the buying/selling center.
- The nature of the exchange between the two organized behavior systems.
- The interdependency of the parties in the interorganizational dyad.
- The interaction between the organizations and representatives entitled the vector of interaction.
- The larger macro environment in which the transaction takes place.

THE INTERACTIVE EXCHANGE MODEL OF THE INDUSTRIAL TRANSACTION



These aspects captured in the model represent important conceptual advances in viewing the interorganizational relations involved in industrial marketing. Thus, the model, rather than looking at only one side of the dyad, takes into account the coalitions of both organized behavior systems in the interorganizational dyad. The selling center as well as the buying center is represented in the model. The interdependency of the coalitions that compose the buying or selling center within the respective firms is represented by the interconnecting circles on each side of the dyad. The model hypothesizes that the various departments are interdependent to the degree that they provide some input that is used by their respective coalition. Each organizational coalition is contained within the boundaries of its organization. The communication that takes place between the firms is represented by the vector of interaction, and the entire transaction takes place within the larger context of economic, political, sociological, legal, environmental, and competitive influences in the macro environment. It needs to be emphasized that the vector of interaction is more than the communication taking place between two boundary role representatives or even two coalitions. It is the total interaction between the two organized behavior systems. As such, it represents all the policies, procedures and programs of each firm in transactions with the other firm in the dyad. As the transaction becomes more complex, this vector expands to include as many coalitions on either side of the dyad as are needed to carry out the interaction and conduct the transaction.

Industrial Buying Behavior: Japan Versus the U.S.

Using the Interactive Exchange Model of the industrial transaction it is possible to both describe Japanese approaches to buying and selling and to contrast those approaches to organizational behavior in the U.S. The starting point for this analysis is with the aspects of the macro environment that impact and shape organizational behavior.

The Macro Environment of Japanese Industrial Marketing

The environment in which the typical Japanese industrial firm operates is significantly different in many ways from the U.S. macro environment. The differences provide important advantages as well as constraints on

buyer/seller interactions. The following examples are meant to be illustrative of the use of the model rather than exhaustive.

Economic Influences

The formation of "industrial groups" may be the most significant factor in the Japanese firm's economic environment. An industrial group consists of three major components: the general trading companies, the banks, and the manufacturing base. According to Kotler et al. (1985) the industrial group formation does three things: "First, it greatly expands the capabilities/options of the firms, particularly medium-sized establishments; second, it allows Japanese manufacturers to concentrate primarily on their product development and manufacturing operations; and third, it reduces the risk of new ventures because of group support and financing." U.S. firms, operating independently of such organizations, must develop organizational skills in finance, marketing, distribution, and planning in order to compete strategically. Thus, a Japanese industrial group is like a trans-organization structure with a financial base provided by the banks, a manufacturing base provided by the manufacturing firms, and a trading/distribution base provided by the general trading companies.

Political Influences

The Japanese government, through a number of ministries aids business by instituting strategic policies and performing services of administrative guidance. The Ministry of International Trade and Industry is the most influential of these bureaucracies. It's major objective is to strengthen the competitive position of Japanese industry.

In addition to the major role of the Ministry of International Trade and Industry (MITI), the Economic Planning Agency (EPA) of the prime minister's office plays a significant role in economic policy-making. The EPA does long-range planning for economic growth and suggests areas where government support and action can best advance these plans. The process of developing these long-range economic plans involves close consultation with academicians, consumer groups, and industry. Industry's participation occurs through advisory committees composed of business leaders and through business groups. Ministries and other independent agencies formulate their own long-range economic plans, but consider the EPA ideas as part of the process.

Two ministries have the primary responsibility for implementing policy guidelines: The Ministry of Finance (MOF) and MITI. Baranson (1983) notes: "The MOF is the ultimate source of financing, and by guiding commercial banks, it influences the direction of financing of industrial investment in Japan and has intimate links with the entire banking system." Banks and other investors tend to rely on the MOF-MITI perceptions of what are the most promising investment areas for expansion and innovation. This enables the banks and investors to maintain and expand Japan's industrial growth while minimizing commercial risks. This approach also permits the central government to make long-range decisions for the entire society. The latest decision of this type is that by the year 2000, Japan will be primarily an information based economy.

Sociological Influences

A number of observers have noted the high level of identification the typical Japanese develops with his organization. The corporation for which an individual works provides a most significant aspect of their identification. According to Vogel (1975): "A Japanese employee is more likely to identify with the organization where he works than with a professional or occupational specialty." Coupled with this there is a conscious management effort to maintain a sense of belonging by employees within an organization.

Kotler et al. (1985) also point out a number of important sociocultural influences on business strength. The first three support the concept of group identification:

- A strong sense of belonging to a group and community
- A tendency toward self-effacement and responsibility to the group
- A strong sense of "we" versus "them"
- A willingness to work hard and persevere toward long-range goals
- A strong belief that competence increases with seniority

Legal Influences

Japan has many fewer lawyers than the U.S. Coupled with this shortage of lawyers there is a traditional reluctance to call on lawyers. The Japanese do not always prefer clear-cut solutions handed down by the courts. Social settlements like compromise or conciliation are often preferred to legal settlements. According to Akamatsu (1968) this preference exists partly because: "... many of them, keeping the medieval family structure in mind, feel that drastic victory or defeat in judicial litigation would interfere with amicable relations between people, rather than protect their rights." Another reason for avoidance of legal solutions to business problems is the congestion in the Japanese courts. A case proceeding through to the Supreme Court could wait more than ten years to get a final judgement. Most laws are not strictly enforced most of the time; rather, they function as guidelines or limits. Contracts to conclude business negotiations are the exception rather than the rule and many business deals are closed by handshakes.

Environmental Influences

Many observers feel that the factor of greatest importance in molding the culture of Japan has been its geographical isolation. This geographic isolation has supposedly led the Japanese to develop extremely distinctive national traits and to have a high disregard for foreigners. The isolation is also credited with producing a homogeneous union of people, who, because of overcrowding, developed a strong competitive spirit. Another aspect of the Japanese environment is a lack of raw materials. This has led to the export driven economy characteristic of Japan today. In order to import raw materials and agricultural products, while maintaining a balanced economy, Japan has turned to exploring value added manufactured products.

Competitive Influences

While the outsider's view of Japanese industry is often that of close corporate cooperation, the opposite is closer to the truth. For instance, Japan does not have only one or a few large companies specializing in an industry. The most common situation is intense competition with a number of companies with similar product lines all operating in a homogeneous market. According to Lazer, Murata, and Kosaka (1985): "Japanese executives have expressed the feeling that having survived fierce domestic competition, the international competition becomes far easier to deal with." An interesting question arising here is whether it is the heightened competition of the domestic market that keeps international companies from penetrating the Japanese market or an intended protectionism.

U.S. and Japanese Firms Compared

A large scale empirical study was conducted by Kagono et al. (1985) to compare U.S. and Japanese organizations. One of the components of this study was the respective views of the operating environments of U.S. and Japanese executives. Table 1 presents the results of the Kagono et al. study.

In summing up, Kagono et al. felt: "Japanese firms face a less diverse, less competitive, more volatile and high opportunity environment, and a less mobile market. They

Table 1

Comparison of Environmental Characteristics^a

Dimension of the Environment	U.S.	Japan
Markets		
product diversity	4.62	4.20***
geographical diversity	5.20	4.26***
level of product information	4.86	4.90
diversity of promotional media	4.75	4.43*
Competition		
intensity of rivalry	5.66	5.32**
inability to influence market conditions	4.00	3.60***
average profitability of the principal market	4.21	4.26
entry barriers to the principal market	4.77	5.22***
Rate of environmental change		
in technology	4.10	4.46*
in demand	3.82	4.09*
Constraints imposed by inter-organizational relationships		
with banks and major stockholders	2.81	3.03
with major distributors and customers	2.98	3.75***
with major suppliers and subcontractors	2.46	3.71***
with government	4.36	3.16***
with competitors	2.04	2.64***
Mobility of labor market		
for managers	3.46	1.78***
for technological experts	3.45	1.97***

Notes: ^aThe higher the mean score, the more typical is the characteristic.

*significant at .05 level by t-test of means

**significant at .01 level by t-test of means

***significant at .001 level by t-test of means

Adapted from Kagono et al. (1985a)

are, moreover, constrained by interrelationships with other organizations to a greater extent than U.S. firms." Some of the results of the Kagono et al. study do not support the results of previous observers. Several possible explanations exist for this:

- The Kagono et al. study dealt with executive perceptions rather than some objective measure of the firm's environment, thus differences between perception and reality may exist.
- Other previous research was based on less rigorous data and may have been misinterpreted by the researchers.
- Things may change in Japan faster than many observers feel is the case. Japan may be a more dynamic society and less bound by tradition than many researchers feel.

The Buying Center

Several researchers (Ouchi and Jueger 1978, Kagono et al. 1985) have described U.S. firms as mechanistic organizations and Japanese firms as organic. Table 2 presents the dimensions along which U.S. and Japanese organizations can be contrasted.

The differences in the typical U.S. firm and Japanese firm are significant and have numerous implications for buyer behavior. Japanese firms tend to be slower in the initiation stage of decision making because of consensual decision making. Upon deciding, however, the implementation stage is quicker and smoother than in U.S. firms. The Japanese concepts of "Ringi Sei" and "Nemawashi" are part of the consensual decision-making process. Ringi Sei is a system whereby documents are drafted at lower levels in an organization and then circulated to various units for approval. This system relies on and builds homogeneity and consensus with the decision-making group. Thus, any buying decision based upon ringi sei should provide a higher level of satisfaction among buying center members. If

Table 2

Characteristics of Two Familiar
Organizational Ideal Types: A and J

Type A (American)	Type J (Japanese)
Short-term employment	Lifetime employment
Individual decision-making	Consensual decision-making
Individual responsibility	Collective responsibility
Rapid evaluation and promotion	Slow evaluation and promotion
Explicit, formalized control	Implicit, informal control
Specialized career path	Nonspecialized career path
Segmented concern	Holistic concern

Adapted from Ouchi and Jaeger (1978)

disagreements arise at the lower levels in the organization while drafting or circulating a document, they are generally taken to higher levels to be resolved. The ringi system is not used for all types of buying decisions. Decisions which are relatively complex and require a high level of coordination, like a new task purchase situation, use the ringi system. Straight rebuy situations would not use the system. Nemawashi can accomplish the same effects as ringi sei without the need for the circulation of formal documents. Nemawashi is the term given to the continuous consultation among peers in an organization and between levels and units or divisions. This consultation occurs for decisions from mundane detail to broad general issues. It usually takes place in a climate of mutual confidence and support. This has two effects on buying behavior: it slows down the decision-making process but it builds consensus and smooths implementation.

The results of the Kagono et al. (1985a) study support and extend this view of Japanese buyer behavior. They found that while U.S. firms place a heavier emphasis on value commitment, innovation and risk-taking, and record of individual accomplishment, Japanese firms place more emphasis on capability as a generalist, and credibility and popularity within the company. These value differences affect the degree and style of participation in buying center decisions. In U.S. firms participation tends to be limited to specialists whose input is necessary to the decision and those with a direct stake in the outcome. In Japanese firms the buying center is more diffuse with generalists and others with a limited stake participating to ensure consensus. Senior executives play different roles in buying decision in U.S. and Japanese firms. In U.S. firms senior executives play a major role in initiating and implementing innovation and are thus involved in most new task purchase decisions. Japanese senior executives play a major role in promoting cohesiveness within their organizations. When conflict arises in the buying center, U.S. executives are more likely to use a confrontational style while Japanese executives are more likely to use Nemawashi or to simply force a consensus.

Vector of Interaction

An area that Japanese firms seem to have developed to a much higher state than U.S. firms is interaction between organizations. At the highest level of development interorganizational linkages lead to networks of firms. The Japanese have developed networks between manufacturers and suppliers, between competitors, within channels of distribution, from spinoffs, and the highest form of corporate network, the industrial group.

The network of primary concern to industrial buyers and sellers is that between manufacturers and suppliers. These tend to be dense inter-company networks often difficult for outsiders to penetrate. These networks often make companies into "production wholesalers" who have their own assembly plants surrounded by suppliers rather than making their own parts and materials (Nakamura 1982). U.S. companies tend to be more vertically and horizontally integrated. In contrast,

Japanese firms tend to rely more heavily on outside suppliers. There is also a dependence on good relations with companies in their industrial group for mutual assistance (Kagono et al. 1985b).

Formation of this type of network through strong vectors of interaction is a significant factor contributing to the difference in competitiveness. For instance, it enables Japanese subcontractors to use their experience and expertise gained in specialization to help larger companies in the areas of cost, quality, and speed of production. These subcontractors frequently pay lower wages and this contributes to lower overall labor costs. U.S. firms with more comprehensive, integrated approaches to production normally have higher wages.

In high technology purchases, the vector of interaction between Japanese firms implies technical and marketing capabilities to adapt product designs to buyer needs and to provide ancillary trouble-shooting and maintenance services. Vectors of interaction are strengthened by aggressive customer servicing teams that combine application engineering and marketing skills, supplemented by the high level of technical absorptive capabilities that is typical of Japanese end users.

The buyer-seller relationship in the U.S. is generally much weaker than in Japan in several significant respects. Few U.S. firms have developed customer servicing to anywhere near the extent or depth of Japanese suppliers.

Japanese component supplier industries generally are highly responsive to OEM requirements in terms of quality, cost effectiveness, and rapid adjustment to component design changes. The OEM supplier relationship is also often highly symbiotic, in that OEM's provide small to medium size component suppliers with financial resources and technical support services and personnel. With few exceptions, these buyer-seller relationships in the U.S. are not nearly as supportive as in Japan.

With respect to competitors, the foremost example of well developed vectors of interaction is of those companies involved in the development of high technology. The networks are usually coordinated by MITI and other government or quasi-government organizations such as Nippon Telephone and Telegraph. There are also Japanese examples of collaboration between companies without government coordination. These networks of competing companies are primarily concerned with the purchase of high technology and the conduct of joint research. They provide Japanese companies with an important method for accumulating the necessary resources in an environment where acquisition of other business is difficult and interfirm mobility of skilled specialists is low.

The third networking difference between U.S. and Japanese companies lies in the very close relations between organizations in the same channels of distribution (Kagono et al. 1985b). These channels are often very complex and support more middlemen than in the U.S. Very strong personal relations often closely tie manufacturers and distributors to buyers. The market strength of many leading Japanese companies is partially attributable to the size and cohesion of the sales networks that have become part of their corporate networks.

The fourth type of networking characteristic of Japanese companies is their intentional promotion of spin off enterprises as subsidiaries (Kagono, et al 1985b). As the number and size of spinoffs grow, they create an extended corporate group. The spinoffs are largely autonomous even though the parent company is usually a substantial minority owner of the subsidiary. Each company is normally listed on the stock exchange. Close links are maintained to the parent company, but the structure is loosely-coupled. This allows a higher level of adaptability than the more tightly-coupled systems of most U.S. subsidiaries. The implications for industrial buying behavior are unclear. While the Japanese parent company and subsidiary often buy and

sell to each other, the penetration of the parent company by an outside supplier does not necessarily mean sales to the subsidiary. Similarly in U.S. firms, purchasing is sometimes centralized at corporate headquarters, while at other times decentralized to divisions and subsidiaries.

The fifth type of Japanese networking among firms is the industrial group. These are the most complex vectors of interaction between buyers and sellers. Financing and distribution are also provided through the formation of industrial groups. Space does not permit a full discussion of all the aspects of Japanese industrial groups, however, such networks do have major implications for buyer behavior for the firms involved in these extra-organizational structures. There are no close equivalents to Japanese industrial groups in the U.S.

The five types of networks discussed here illustrate how the Japanese have developed the vectors of interaction between firms to create unique systems of extended organizations. These networks and the extended organizations they create sharply contrast with the approach of U.S. companies. The U.S. model draws a clear distinction between an organization and all other firms operating in the same environment through transactions in the marketplace and controls exercised through the organizational hierarchy (Williamson 1975).

The Selling Center

On the other side of the dyad, in the selling center a number of unique phenomena occur (Lazer, Murata, and Kosaka, 1985):

- Organizational position is not equated with authority, and authority cannot be deduced from an organization chart.
- Marketing functions and responsibilities tend to be loosely defined.
- Responsibilities are overlapping and do not fit neatly into departmental units.
- Individuals do not see their duties as being tied to one functional area, either within or outside of marketing.
- Marketing management's main duties involve developing people, getting them to agree, cooperate, work harmoniously, and contribute as much as they can to the company.
- Marketing and sales managers spend much of their time looking after and counseling subordinates and helping distributors, wholesalers, and retailers become more effective.

There are also a number of differences in the typical selling centers in Japan and the U.S.

- Marketing researchers, advertising professionals, and sales managers tend to identify with their professions in the U.S. and intercompany mobility is high. Japanese marketers identify with their companies and mobility is low.
- Japanese marketing executives consider marketing activities to be primarily units of human activity. Managers in U.S. firms often perceive them as impersonal business, sales, and profit activities.
- In U.S. firms, marketing is considered to be an area of business specialization delegated to a group of experts and specialists. In Japanese companies, responsibilities in the selling center tend to be in the hands of a broader but less sophisticated and technically trained group of managers.

The differences in the selling centers in Japanese and U.S. firms go on but these are sufficient to illustrate the general aspects of this side of the dyad in each business environment. An interesting question arises as to how well each form of selling center interacts with different forms of buying centers. The Japanese version is a natural complement to their buying centers. Given the recent successes of Japanese industrial marketing in the U.S., the Japanese selling center may also be more

appropriate in that market as well. How and why the Japanese selling center works and its level of performance against the U.S. version is a complex question that requires further empirical evidence.

Conclusion

This paper has reviewed and contrasted Japanese industrial organization and buying behavior with U.S. industrial buying behavior. Much of the literature used in this review examines only pieces of the Japanese organization. Thus, using the Interactive Exchange Model of the Industrial Transaction an attempt was made to illustrate how a complex model can organize and synthesize a vast body of literature. A number of questions remain unanswered in the literature such as the performance characteristics of each version (U.S. versus Japanese) of the model. Another question is how well one selling center interacts with the other's buying center. These questions need empirical answers. It is a hope that the conceptual model can be used as a general framework to guide these empirical investigations.

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PSYCHOLOGICAL FACTORS INFLUENCING
DECISIONS TO DONATE ORGANS

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Abstract

Previous research on organ donation has suggested that, although most people are aware of organ donation, many are unwilling to consider donating organs. The present study explored several factors related to people's willingness to donate. In addition this study also examined donors' and nondonors' knowledge, awareness and attitudes toward organ donation. The results supported earlier findings that people are generally aware of organ donation. Also, donor/nondonor differences were found in: 1) general attitudes toward organ donation, 2) beliefs concerning the motivation to donate or not donate, and 3) attitudes toward the role of the next-of-kin in the organ donation decision. Implications of these results for increasing organ donation are discussed.

Introduction

There is a great demand for human organs to be used for transplantation. The demand is so great that it sometimes exceeds the supply of organs by multiples of hundreds. Thukral and Cummins (1986), for instance, state that in 1983 only 172 of nearly 14,000 patients waiting for hearts received a transplant. Similarly extreme supply/demand ratios exist for other transplantable organs such as livers, lungs, pancreases kidneys, corneas, bone marrow, and skin. This research project was designed to investigate individuals' knowledge, perceptions, motivations, and attitudes behind the decision to become an organ donor.

There are several reasons for the high demand for transplantable organs: (1) The success and longevity of transplants has increased due to advances in surgical procedures, tissue typing techniques, and the development of new immunosuppressive drugs (Caplan 1984); (2) A high proportion of end-stage diseases that cause individual organs to be incurable thus making transplantation the only remaining option (Overcast et al. 1984); (3) The desire on the part of many patients to improve the quality and duration of their life through a transplant (Clark et al. 1983).

According to Caplan (1983), American courts since the 1950's have emphasized voluntarism and informed consent as guidelines to govern the procurement of organs. The emphasis on "voluntarism" changed to "encouraged voluntarism" with the passage of the Uniform Anatomical Gift Act in 1973. This act made it legal for people to donate organs through the use of donor cards or living wills; it also allowed next-of-kin to make donations for relatives who had not indicated a prior unwillingness to donate organs.

The intent of the Uniform Anatomical Gift Act was to bring the supply of organs closer to the demand. Unfortunately, the shortage is even worse today. Brams (1977) attributes the lack of transplantable organs to two causes: (1) The public's lack of knowledge about the organ donor program; (2) An unwillingness by many people to consider donating an organ even when all the facts are known.

Empirical support for these causes is mixed at best. In regard to the first, several studies have reported that most people are aware of organ donation. A Gallup Poll (1983) found that 93% of a nationally representative sample had heard or read something about organ transplants. Similarly, Mannien and Evans (1985)

reported that 93.7% of their subjects knew about organ transplantation and 69.1% had heard about or had received information on organ donation. These earlier studies, however, did not investigate the extent or type of knowledge available. Thus, although it does appear that most people know something about organ donation, more information is needed about what they do know.

Several empirical studies provide indirect evidence on the second cause cited by Brams (1977) -- an unwillingness to consider donation, even when the person is knowledgeable about transplantation. Prottas (1983) reported in a 1975 Los Angeles survey that support for donation dropped 21% when a specific organ was mentioned. In addition, the Gallup Poll (1983) found that 72% of those aware of organ transplants were very likely to give permission to have the kidney of a loved one donated; this value dropped to 50% for donation of their own child's kidneys and to 24% for donation of their own kidney after death. Prottas (1983) argued that a deterioration of support is seen as one moves from abstract support for the concept of donation to more concrete and personal behavioral intentions. The reasons for this deterioration, however, have yet to be explored.

In order to increase the supply of organs, additional research is needed to understand the reasons why people decide to or not to donate organs. Therefore, one of the main purposes of this study was to determine what factors relate to a willingness to donate organs for transplantation.

Another purpose of this research was to segment subjects by their willingness to donate. The goal was to determine if there are differences between donors and nondonors on demographic and psychographic variables (e.g., sex, age, religion, knowledge, and attitudes). This would allow construction of a profile of donors and nondonors, a step suggested by Koop (1983).

Method

Subjects

Volunteers were solicited from General Psychology classes at Kansas State University to participate in an experiment on "attitudes toward organ donation." Sixty-eight men and sixty-nine women participated. The subjects filled out, at their own rate, a questionnaire dealing with organ donation. Most required between 30 and 40 minutes to complete the form.

Although psychology students are a nonrepresentative sample, they are an ideal target population for donation. They are at an age at which their organs are the greatest value for transplantation. In addition, they are more likely to engage in activities which place them at risk of fatal accidents. Thus, students represent an appropriate sample for research on organ donation.

Questionnaire

An eight-page "Organ Donation Biodemographic Questionnaire" was developed. It included the following sections (in order):

(1) Demographic Information. The initial questions assessed general demographic information such as age, sex, educational level, religious affiliation, and income.

(2) Awareness of Organ Donation. Subjects were questioned about their awareness of organ donation and their knowledge of organ donor cards. In addition, they were asked if they had signed the organ donor permission on their driver's license; if not, they were asked if they would be willing to do so.

(3) Attitudes Toward Organ Donation. Using a seven-point scale from "strongly disagree" to "strongly agree," subjects were asked questions about the perceived need for organs, possible effects of advertising, anticipated final use of organs (transplantation vs. research), and the perceived significance of the contribution made by donors.

(4) Motivations for Donating. Using a seven-point scale from "not important" to "extremely important," subjects were questioned about possible motivations for donating, e.g., altruism, increased self-esteem, and helping the cause of science.

(5) Motivations for Not Donating. Using a seven-point scale from "not important" to "extremely important," subjects were asked about reasons for not donation, e.g., religious concerns, fear of premature organ removal, and desire to keep the body intact.

(6) Role of Next-of-Kin. Based on a seven-point scale of "strongly disagree" to "strongly agree," subjects rated statements concerning the part that next-of-kin play in organ donation. They were asked about their perceptions of the relationship between signing an organ donor card, the next-of-kin's wishes, and doctors' efforts to encourage donation.

(7) Religious Attitudes. Using a seven-point scale from "disagree strongly" to "agree strongly," subjects were asked about the role of their religious leader and the support of their religious community in their donation decision.

The questionnaire also contained some additional sections which are not relevant to the results reported in this paper.

Results and Discussion

The analysis of the results was divided into two sections. The first concerns knowledge, awareness, and attitudes toward organ donation. The second concerns differences between donors and nondonors. The findings and implications for each of these issues will be considered in turn.

Knowledge, Awareness and Attitudes

Relatively few subjects (13.1%) had signed a donor card or the relevant section of their driver's license. This figure is somewhat lower than rates reported previously (Overcast et al. 1984). Many more subjects (37.2%) indicated that they would be willing to sign if they "were asked to do so." Apparently, many individuals do not perceive the organ donor portion of their driver's license (or organ donor cards) as a specific request to donate. Perhaps such a request would be more effective if it came at a more personal level.

The low donor rate cannot be attributed to lack of knowledge. A large majority had heard about organ donation (99.3%), knew what an organ donor card was (78.1%), and agreed with the statement "there are thousands of people in the U.S. who are waiting to receive donated organs" ($M = 6.07$ on a 7-point scale).

When asked about reasons for donating, subjects' responses reflected the general belief that other-oriented reasons (e.g., "to help others") were more important motivators than either religious or self-oriented reasons (e.g., "to encourage others to remember me as a good and caring person"). This is consistent with prior surveys and case studies indicating

that expressed motives for donating are primarily other-oriented and altruistic (Cleveland 1975a, 1975b; Feller and Marshall 1981; Moores et al. 1976; Prottas 1983).

When asked about reasons for not donating, greatest importance was attached to a concern that a doctor may "declare death prematurely for the sole purpose of obtaining my organs" ($M = 4.29$ on a 7-point scale). Similarly, Prottas (1983) reported that "the most commonly expressed fear . . . is that agreeing to become a donor would negatively affect the treatment one receives in a hospital" (p. 290).

Most subjects expected their next-of-kin to go along with their expressed desire to donate (72.3%) or not donate (83.2%) organs upon their death. An interesting pattern emerged when subjects were asked to consider their next-of-kin's decision if their own (i.e., the subject's) wishes were unknown. Under such circumstances, 19.0% expected their next-of-kin would give permission for donation; 48.2% expected that they would not. Nearly a third of the subjects indicated that they did not know what the decision of their next-of-kin would be. This suggests that many subjects are unaware of their family's feeling about organ donation.

Perhaps subjects do not perceive any real need to discuss organ donation with family members; they generally agreed that "if I indicated on the back of my driver's license or donor card that I wanted to donate my organs, my next-of-kin cannot legally refuse my wish" ($M = 4.98$). In fact, the next-of-kin are always asked to give legal permission (Overcast et al. 1984). The apparent lack of communication among family members about organ donation deserves further research.

Finally, subjects believe their religious leaders and religious community would support their decision to donate. This was not, however, very important in their decision to donate. Although there was no differences between subjects of different Christian denominations, nonreligious subjects did rate religious reasons for donating and not donating as less important.

Donors vs. Nondonors

A major purpose of this study was to assess attitudinal differences between subjects who were willing to sign an organ donor card and those who were not. Because only 18 out of 137 subjects indicated that they had signed such a card, the 44 additional subjects who indicated that they would be willing to do so were included in the donor group. The group of "nondonors" ($N = 75$) included those who either said they were unwilling to sign ($N = 8$) or were not sure ($N = 67$).

Donors and nondonors were found to differ in some of their (1) general attitudes toward organ donation, (2) beliefs concerning the motivation to donate and not donate, and (3) attitudes toward the role of the next-of-kin in the organ donation decision.

Donors, in comparison with nondonors, agreed more strongly with the statements (1) "There are thousands of people in the U.S. waiting to receive donated organs" [$M_s = 6.32$ and 5.86 , respectively, $F(1,133) = 4.35$, $p < .05$] and (2) "An organ donor has the potential to save many lives by donating all of his/her organs" [$M_s = 6.21$ and 5.61 , respectively, $F(1,133) = 6.82$, $p < .05$].

Donors and nondonors were found to differ more in their reasons for not donating than in their reasons for donating. Donors and nondonors were significantly different in their importance ratings on 6 of the 10 potential reasons for not donating listed on the survey (see Table 1). On the other hand, the two groups were found to differ on only one potential reason for donating: Donors rated "To help the cause of science" as a more important reason for donating ($M = 4.73$) than

did nondonors ($M=3.84$), $F(1,133)=8.07$, $p < .01$. Thus, whereas donors and nondonors appear not to differ markedly in their evaluation of the motivation for donating, nondonors may be especially "well-armed" to explain (or rationalize) their decisions not to donate.

TABLE 1
UNWILLINGNESS TO DONATE ORGANS
(DONORS VS. NONDONORS)

Item	Donor	Nondonor	F (1,133)
	Mean	Mean	
1. Religious/spiritual reasons	2.32	3.05	4.34*
4. A concern that my organs will not be able to be transplanted and will be discarded	2.52	3.34	6.46*
5. A concern that my organs will not be able to be transplanted and will be used for medical research	2.24	3.00	5.35*
7. A concern about disfiguring my body after death	2.58	3.74	10.31**
9. I'd rather leave my organs in my body	2.11	4.49	64.74***
10. There is not any real need for organs	1.95	2.67	4.79*

* $p < .05$ ** $p < .01$ *** $p < .001$

In general, nondonors were found to have more negative attitudes than donors about the role of the next-of-kin in the organ donation process (see Table 2). For example, nondonors indicated that they would be less likely than donors to donate (or consider donating) the organs of a loved one upon his or her death. Furthermore, nondonors were less likely than donors to indicate that donating the organs of a loved one would bring them personal comfort and solace during their time of grief.

TABLE 2
NEXT-OF-KIN ATTITUDES
(DONORS VS. NONDONORS)

Item	Donor	Nondonor	F (1,133)
	Mean	Mean	
1. If my kin dies and I didn't know how he/she felt about donation, I'd consider it.	4.48	2.55	35.42***
2. If my kin dies and I didn't know how he/she felt about donation, I'd donate	3.20	1.76	26.10***
3. If my kin dies and I didn't know how he/she felt about donation, a doctor's request would make it more likely for me to grant permission	4.77	3.32	18.27***
5. Kin's approval should be necessary for organ removal even if the deceased person has designated that he/she wants to donate	2.32	3.17	6.94**
7. If someone has signed a donor card, the doctor should have the right to remove organs without kin's approval	4.19	2.92	12.62***
8. If a donor card has not been signed, the doctor should have the right to remove organs without kin's approval	1.60	1.17	4.47*

TABLE 2 (cont.)
Next-of-Kin Attitudes
(Donor vs. Nondonors)

	Donor	Nondonor	F (1,133)
	Mean	Mean	
9. Donating my kin's organs would bring me comfort and solace in my time of grief	4.27	2.81	21.02***

* $p < .05$ ** $p < .01$ *** $p < .001$

Conclusion

This survey provides preliminary insights into (1) factors which encourage/discourage organ donation and (2) differences between donors and nondonors. The implications of present results for each of these issues will be explored below.

Organ Donation

The reasons cited for donating appear consistent with global altruistic concerns, e.g., helping others. Certainly, the reasons cited by subjects "sound good" and are easily justifiable. Such self reports, however, may reflect a tendency to provide socially desirable responses (for a further discussion of this issue, see Barnett et al. 1987).

In general, subjects cited more focused reasons for not donating. Specifically, there was a consistent concern that donors would receive less-than-adequate medical care because of a desire to obtain their organs. Similarly, Prottas (1983) reported that people fear they "will not be adequately cared for in a hospital because someone will want them to die" to get their organs (p. 301). Whether this is a deep-seated fear or a surface excuse for not donating is unknown.

It is also worth considering some of the factors which were not viewed as important in the decision to donate. Although we had expected religious reasons to be central, at least for some subjects, religion was consistently unimportant. Similarly, the next-of-kin were seen as either playing an uncertain or an irrelevant role in organ donation; subjects appeared unaware of the necessity of obtaining legal permission from next of kin.

The fact that subjects held inappropriate beliefs about several facets of organ donation may be a cause of some concern. For instance, the fear about possible premature termination of medical care reflects a surprising mistrust in the medical community. Similarly, subjects' ignorance about the role of next-of-kin shows a clear lack of knowledge about the legalities of organ donation. Whether such misconceptions can be addressed through consumer "education", or whether more extensive measures are needed will require further analysis.

It is perhaps symptomatic of consumers' general state of ignorance that many subjects volunteered that they had learned a great deal from completing the questionnaire. In fact, the survey was designed to explore knowledge and opinions but not to provide feedback. Apparently, most people have thought so little about organ donation that even seemingly neutral questions prompt insight and analysis by respondents. The potential for inadvertently altering subjects views of donation by asking such questions may be a cause of some concern.

Donors vs. Nondonors

The differences in responses of donors and nondonors were often striking. One major source of difference reflected motivations for not donating. For instance, nondonors were more concerned about disfigurement and leaving the body intact than were donors. One implication of such findings is clear: Rather than focusing exclusively on the benefits of organ donation to the donor and

recipient, messages to encourage donation should be constructed to dissuade individuals of their fears regarding the organ donation process. Thus, messages could directly address the concern that, following organ removal, the body will be disfigured and unrepresentable in an open casket.

Another source of differences between donors and nondonors concerned the role of next-of-kin in donation. Donors generally felt more positively about what their next-of-kin would do or what they (as next-of-kin) would do with regard to donating organs. Nondonors, on the other hand, were more reluctant to see either themselves or others as next-of-kin make the decision to donate organs. Apparently, personal reservations about being an organ donor are readily translated into reservations about donating the organs of a loved one. The implication seems clear: Individuals interested in donating their organs upon death need to discuss their wishes with family members, especially with those who will support and carry out their wishes.

It is worth noting that the differences observed between donors and nondonors were not as extreme as they might have been. In assigning subjects to the donor group, those who indicated they would be willing to sign a donor card, but had not in fact done so, were included along with those who had signed. Similarly, the large majority of the nondonor group were people who said they were "not sure" they would sign. Presumably, a comparison of more strongly committed donors and nondonors would have produced even more pronounced differences.

The ability of our results to reveal major differences between donors and nondonors suggests the usefulness of this dichotomy. The attitudes, knowledge, and motivations of these two groups differ substantially and should be explored further. We are now in the process of investigating the sources of such differences, e.g., in the decision making process. The results of these analyses may be of particular value to social marketers and transplantation specialists in their efforts to encourage organ donation.

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THE ROLE OF SELF- AND OTHER-ORIENTED MOTIVATION
IN THE ORGAN DONATION DECISION

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Abstract

The purpose of the present study was to compare the effects of self- and other-oriented public service announcements on undergraduates' attitudes toward kidney donation and their expressed willingness to donate their own or a loved one's kidneys upon death. In contrast to the results of prior survey studies of individuals' motives for donating, subjects were found to respond more favorably to a message that emphasized benefits to the self than to a message that emphasized benefits to the other. Some possible explanations for the present findings are discussed.

Introduction

There is a serious shortage of organs available for transplantation in this country. For example, the American Council on Transplantation estimates that although nearly 7,000 kidney transplants were performed in 1984, there were approximately 8,000 patients awaiting a kidney at the end of the year. A potential kidney transplant recipient may wait for years before an appropriate match (with regard to size, tissue, and blood type) is found. Unfortunately, the longer a person waits, the more likely a new organ will be rejected.

As organ transplantation has become a more common medical procedure, there has been a growing interest in studying people's attitudes and knowledge concerning organ donation (Belk and Austin 1986; Fellner and Marshall 1981; Manninen and Evans 1985; Overcast, Evans, Bowen, Hoe and Livak 1984; Pessemier, Bemmar and Hanssens 1977; Prottas 1983). Organ donation is a particularly interesting topic from a psychological perspective because it involves a unique kind of helping behavior that has obvious and serious consequences on the lives of others. In addition, although most people express favorable attitudes toward organ donation, very few perform the behaviors that are necessary to donate, such as signing an organ donor card or talking with family members about their desire to donate (Manninen and Evans 1985; Overcast et al. 1984; Prottas 1983). As suggested by Prottas's (1983) discussion of "the marketing of organ donation", we need to increase our understanding of people's motives for donating (or not donating) and to investigate procedures for increasing the rate of donation.

The literature on helping behavior may provide a useful framework for conceptualizing the motivation to donate human organs. Many theorists and researchers in the helping area (Barnett in press; Batson and Coke 1981; Eisenberg 1982; Karylowski 1982) have distinguished between self- and other-oriented concerns in the decision to assist another individual. In a similar vein, Sojka (1985) has recently suggested that monetary donations to non-profit organizations can be viewed as being motivated by altruistic (i.e., other-oriented) or non-altruistic (i.e., self-oriented) concerns. It is our contention that the self versus other motivation distinction may also prove to be a useful one in understanding the organ donation process and in influencing individuals' decisions to donate.

The purpose of the present study was to compare the effects of self- and other-oriented public service announcements (PSA) on undergraduates' attitudes toward kidney donation. Since the next-of-kin frequently play a critical role in the organ donation process (Overcast et al. 1984; Prottas 1983), we also asked subjects to role-play a relative who

must make the donation decision for a dying loved one (whose own wishes concerning organ donation were presumably unknown). Thus, questions concerning an individual's willingness to donate his/her own and a loved one's kidneys upon death were included on the questionnaire. We also attempted to examine the influence of individual differences in empathy on responses to the self- and other-oriented PSA. The helping behavior of a highly empathic individual, in contrast to a less empathic individual, is believed to be activated by a predominately altruistic motive (e.g., Batson and Coke 1981). Therefore, we expected that highly empathic individuals would be more responsive to the other-oriented PSA than would their less empathic counterparts.

Method

A total of 77 undergraduates (38 males and 39 females) enrolled in General Psychology at Kansas State University received course credit for their participation in this study. Subjects were run in small groups and were led to believe that they were taking part in two independent studies conducted during a single testing session.

In the "first" study, a female experimenter told subjects that they would be asked to complete a questionnaire after listening to a brief public service announcement (PSA) being test marketed by the (fictitious) National Kidney Association. In fact, there were two versions of the PSA: one tape stressed self-oriented reasons for donating; the second tape stressed other-oriented reasons for donating (extensive pretesting of the PSA messages with undergraduates affirmed that the self- and other-oriented tapes were perceived as such). The script for the other-oriented PSA read as follows:

This is Jerome Kennedy, speaking for the National Kidney Association.

Between 1954 and 1985, over 76,000 kidneys were donated in this country. Although these numbers are encouraging, there remains a shortage of kidneys available for transplantation. The Center for Disease Control estimates that no more than 15% of deceased individuals who could serve as donors actually do so. This is in spite of the fact that the donor, or his or her family, are never asked to pay any costs related to the donation of the kidney. All costs are paid by the National Kidney Association in cooperation with a regional organ bank.

I would like you to take a few moments to consider the decision to donate.

--Few decisions in your life will have such a dramatic effect on the lives of others.

--A donated kidney provides immeasurable benefit to those who receive the donation.

--It will help others overcome a debilitating and potentially life-threatening kidney disease.

--Just imagine how they will feel to be healthy and to live a normal life once again with their family and friends.

Please consider the decision to donate. Do it for them. Thank you.

The initial portion of the self-oriented PSA was identical to the other-oriented PSA; however, the self-oriented PSA concluded in the following manner:

I would like you to take a few moments to consider

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the decision to donate.

- Few decisions in your life will be as meaningful to you as this one.
- Donating can be extremely beneficial to you, the person who makes the positive decision to donate.
- It is an important personal decision that will make you feel better about yourself and will say something very positive about you as an individual.
- People who learn of your decision will undoubtedly think of you as a good and caring person.

Please consider the decision to donate. Do it for yourself. Thank you.

After listening to one of the two PSA tapes, subjects completed the "Kidney Donation Questionnaire" (see Table 1).

TABLE 1

QUESTIONS INCLUDED ON THE KIDNEY DONATION QUESTIONNAIRE

1. How understandable was the public service message?
2. How effective do you think the message would be in getting people to think about the issue of kidney donation?
3. How clearly presented were the reasons for donating?
4. How has your attitude toward donating your kidneys been changed by this message?
5. In your opinion, how would others' attitudes about donating their own kidneys be changed by this message?
6. How has your decision to donate your kidneys been changed by this message?
7. In your opinion, how would others' decisions to donate their own kidneys be changed by this message?
8. How has your attitude toward donating the kidneys of your next-of-kin been changed by this message?
9. In your opinion, how would others' attitudes about donating the kidneys of their next-of-kin be changed by this message?
10. How has your decision to donate the kidneys of your next-of-kin been changed by this message?
11. In your opinion, how would others' decisions to donate the kidneys of their next-of-kin be changed by this message?

This questionnaire contained 11 items; for each item, subjects responded to a 9-point scale ranging from 1 (reflecting a very unfavorable rating) to 9 (reflecting a very favorable rating). The first three items required each subject to rate (1) how understandable the PSA was, (2) how effective it would be in getting people to think about the issue of kidney donation, and (3) how clearly presented the reasons for donating were. The remaining eight items asked about changes in the subject's attitude toward kidney donation and the likelihood of donating in response to hearing the PSA. Some of these latter questions required subjects to role-play a potential donor (whose commitment to donating would be confirmed by signing the back of his or her driver's license or an appropriate organ donation card). Some of the questions required subjects to role-play the next-of-kin who might be asked to make a decision about donating the kidneys of a relative (such as a child or parent) upon his or her death.

Following the completion of the questionnaire, subjects were thanked for their assistance and introduced to another female experimenter who was to conduct the "second" study. Subjects were told that the purpose of the "second" study was to gather data on a new questionnaire assessing particular social reactions. In fact, subjects completed the Mehrabian and Epstein (1972) empathy measure, a 28-item questionnaire tapping individuals' emotional responsiveness to the feelings of others. On this questionnaire, subjects are asked to indicate the degree to which they agree or disagree with each statement (e.g., "It makes me sad to see a lonely stranger in a group") by circling one number on a 9-point scale following each statement. After completing this questionnaire, subjects were fully debriefed and thanked for their participation.

Results

Subjects' responses to the "Kidney Donation Questionnaire" were analyzed by a multivariate analysis of variance (MANOVA) and subsequent univariate analyses of variance (ANOVAs). The MANOVA revealed a significant effect of Type of PSA, $F(11, 63) = 2.08$, $p < .05$. Although subjects indicated that the reasons for donating were more clearly presented in the other-oriented ($M = 7.23$) than self-oriented ($M = 6.05$) PSA [$F(1, 73) = 12.70$, $p < .001$], they generally responded more favorably to the latter message. In fact, for all 8 questions dealing with attitudes toward and willingness to donate, the mean ratings for the self-oriented PSA were higher than those for the other-oriented PSA. Interestingly, the tendency to favor the self-oriented PSA was found to be most marked for the item concerning subjects' willingness to donate their own kidneys upon their death [M s for the self-oriented and other-oriented PSAs were 6.97 and 6.28, respectively; $F(1, 73) = 4.68$, $p < .05$].

No relation was found between subjects' empathy scores on the Mehrabian and Epstein (1972) measure and subjects' ratings on the Kidney Donation Questionnaire.

Discussion

In general, the subjects' responses indicated that they (1) had a more favorable attitude toward kidney donation and (2) expressed a greater willingness to donate their own or a loved one's kidneys upon death after hearing a self-oriented than an other-oriented PSA promoting kidney donation. Unexpectedly, the greater responsiveness to the self-oriented PSA was found for high as well as low empathy subjects.

The general pattern of results reported here is inconsistent with the results of prior survey and anecdotal studies (Cleveland 1975; Fellner and Marshall 1981; McIntyre, Barnett, Harris, Shanteau, Skowronski, and Klassen 1987; Moores, Clarke, Lewis and Mallick 1976; Prottas 1983) indicating that people express motives for donating organs that are primarily other-oriented and altruistic. How can one account for the present findings given the abundance of contrasting reports?

The results of prior studies may reflect the tendency of individuals to report socially desirable (i.e., other-oriented) responses. Such biases may be expected to play a significant role in survey and anecdotal studies that ask people about their willingness and motive to help. In contrast, an experimental manipulation of motives for helping (such as used here) may serve to "camouflage" the socially desirable response, especially in a between-subjects design wherein a direct comparison of the "good" and "bad" motives is not salient. As suggested by Batson, Bolen, Cross and Neuringer-Benefiel's (1986) recent experiment, people's motives for helping (when not directly solicited) may often reflect egoistic rather than other-oriented concerns.

Research on individual's reluctance to donate organs may also provide some insight into the present pattern of results. In a recent report, Belk and Austin (1986) concluded that "a barrier to organ donation is the fear that to do so will diminish the self, even after death." Perhaps the self-oriented PSA was found to be an especially persuasive message precisely because it emphasized an enhancement, rather than a diminution, of the self. In this regard, it might prove interesting to assess the impact of a self-oriented PSA on individuals previously determined to be high or low in self-concerns associated with organ donation.

Another possible explanation for the present results concerns the finding that the reasons for donating were rated as significantly clearer in the other-oriented than self-oriented PSA condition. Perhaps, the self-oriented message was unexpected, required more processing and, as a result, proved to be more influential. This notion, while highly speculative, is consistent with studies (e.g.,

Chaiken and Baldwin 1981; Craik and Lockhart 1972) suggesting that persuasive messages that require "deeper processing" may be more conducive to attitude change than simpler, expected messages requiring little or no cognitive processing.

Perhaps we should not be too surprised with the finding that people respond favorably to self-oriented PSAs because much of advertising appeals to self-interest (people presumably are quite responsive to the described benefits to themselves of a particular toothpaste, soap, or similar product). Future research in this area could compare and contrast the impact of a self-oriented message with other "kinds" of messages (emphasizing norms of giving and helping, for example). It might also prove fruitful to explore the effect of combining two or more "motives" in a single message. Finally, future studies could examine the mediating role of other individual difference variables besides empathy (e.g., religiosity) on individuals' responses to various donation-promoting messages. The results of such research efforts are certain to be of interest to those organizations and individuals concerned with promoting organ donation and donation behavior in general.

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KNOWLEDGE AND IMAGE OF BODY ORGANS:
IMPACT ON WILLINGNESS TO DONATE

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Abstract

Seventy-eight undergraduates were tested about their knowledge and psychological image of body organs. Results indicated that subjects could accurately describe the location and function for many, but not all, organs. The psychological image of the organs, as measured by semantic differential scales, showed that most organs were rated as moderately sacred, adaptable, dependent, personal, and durable. The heart, blood, and brain were consistently ranked as being most important for normal functioning. A significant sex difference was noted in the willingness to donate, even though there was no difference in knowledge. Finally, those subjects unwilling to donate organs held different psychological images of organs than those subjects willing to donate. Implications of the results are discussed.

Introduction

Today there exists an extreme urgency for donated organs due to an increase in incurable diseases. Evans, Manninen, Gersh, Hart, and Rodin (1984) report that diseases of the heart and blood vessels have been the major cause of death in the United States. In 1980, approximately 14,000 people died of conditions for which heart transplants were indicated. The demand for donation of other organs is also high: livers ("Transplants put squeeze on insurers", 1985), kidneys, pancreas (Stuart 1984), corneas, lungs, bone marrow (Caplan 1983), and skin (Chapman 1983) all represent organs for which a great need for donation exists. Thus, the need for organs far exceeds their supply (Brans 1977; Koop 1983; Prottas 1983; Thukral & Cummins 1986).

Previous studies of organ donation decision have focused primarily on how would-be donors perceive the nontherapeutic removal of an organ (Gallop 1983; Manninen & Evans 1985; McIntyre, Barnett, Harris, Shanteau, Skowronski, & Klassen 1987; Pessemer, Bemmar, & Hanssens 1977; Stark, Reiley, Osieki, & Cook 1984). These reports have not dealt specifically with why people have a tendency to donate certain organs over others. For example, there appears to be a higher likelihood for people to donate their kidneys and blood, while they remain hesitant about donating their heart and corneas (Fulton, Fulton, & Simmons 1977). This hesitancy may stem, in part, from the image they have of various organs and the importance or meaning they attach to these organs.

The purpose of the present study was to determine the knowledge and psychological image of various organs and to evaluate the influence of knowledge and image on willingness to donate.

Method

A six section questionnaire was given to 78 undergraduates (42 females and 36 males) at Kansas State University. The subjects were instructed to complete the pages in order and not to turn back to any previously completed page. Subjects typically completed the questionnaire in 30 to 40 minutes.

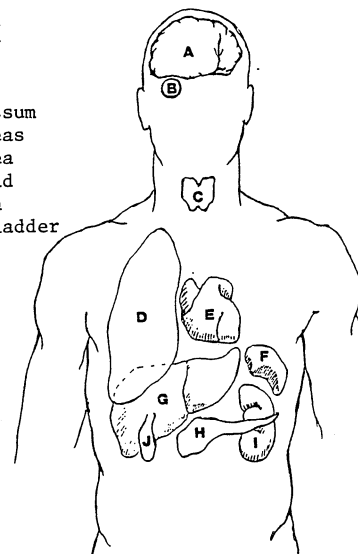
The first section contained 13 questions about demographic variables, e.g., gender, age, parents' occupation. The second section was a test of the subjects' knowledge of organ location. Each subject was given a list of 13 organs and instructed to match the location of these to a schematic drawing of the human body which contained ten of the organs (see Figure 1). Included in the list of organs were three "catch" organs which could not be

assigned to proper locations on the drawing. In the third section of the questionnaire, subjects were given the same 13 organs and asked to match these organs to a brief description of their proper function. Unlike the previous section, all of the organs could be properly assigned.

FIGURE 1

SCHEMATIC DIAGRAM OF HUMAN BODY

1. — Cornea
2. — Kidney
3. — Heart
4. — Lung
5. — Abomassum
6. — Pancreas
7. — Cochlea
8. — Thyroid
9. — Spleen
10. — Gallbladder
11. — Crop
12. — Brain
13. — Liver



After completing the location and function sections, subjects were asked about the meaning or image of various organs. Sixteen semantic differential scales consisting of ratings between bipolar adjectives were used. Subjects judged each organ against the descriptive scales by placing a check mark on one of seven blanks. The 16 scales used were: adaptable/unadaptable, active/inactive, mysterious/not mysterious, sacred/not sacred, warm/cold, strong/weak, durable/not durable, complex/simple, hard/soft, understandable/not understandable, controllable/uncontrollable, large/small, independent/dependent, vital/not vital, emotional/unemotional, and personal/impersonal. In this section, 10 organs (cornea, kidney, bone, skin, brain, pancreas, liver, blood, heart, and lung) were evaluated. The order of organ presentation was randomized across subjects.

The last section consisted of three subsections asking subjects to 1) rank the importance of the 10 organs for the body's normal functioning, 2) check those organs that the subject would be willing to donate, and 3) rank the organs according to how willing they would be to donate them.

Results

As can be seen in Table 1, 90% to 99% of the subjects could accurately describe the location and the function of the cornea, heart, brain, and lung. For the pancreas, liver, and kidney, however, only 30% to 70% could accurately describe the location and only 50% to 75% could describe the function. The percentage of correct responses was not significantly different between the location and function. There was a relatively large discrepancy for the thyroid; over 90% of the subjects could identify location, but only half could identify the correct function.

TABLE 1

PERCENT CORRECT RESPONDING (N=78)

Organ	Location	Function
Cornea	96.1	96.2
Kidney	61.2	59.7
Heart	93.2	96.0
Lung	94.3	97.3
Pancreas	30.3	48.0
Thyroid	91.2	53.3
Spleen	32.7	41.2
Gallbladder	65.2	42.7
Brain	98.3	98.7
Liver	69.2	74.3
Abomassum	73.2	48.2
Crop	94.6	68.7
Cochlea	66.1	94.8

The mean scores for the semantic differential section showed that most of the organs were rated as being very active, strong, vital, and soft. The organs as a group were rated only moderately adaptable, dependent, personal, and durable. Bone was rated as being less active, adaptable, dependent, and mysterious than the other organs; also, bone was rated as being more understandable, controllable, hard, and simple. The brain was rated as very sacred, mysterious, complex, emotional, and personal.

Based on the accuracy of identifying location and function (see Table 1), three categories of organs were defined. The first category consisted of "well-known" organs (cornea, heart, lungs, and brain) which were all quite accurately identified. The second category consisted of "mystery" organs (pancreas, spleen, liver, kidney, and thyroid) which were not accurately identified. The third category consisted of "tissue" organs (bone, skin, and blood) which could not be checked for accuracy of location.

These three categories were then used to combine the organ image ratings into three groups. Using these three groups, the results from nine of the semantic-differential dichotomies are shown in Figure 2. As can be seen, the most accurately identified (i.e., well-known) organs had the highest ratings on all but the mysteriousness and understandability scales. Conversely, the least accurately identified (mystery) organs had the lowest ratings on all but the mysteriousness and activity scales. The tissue organs were generally intermediate, except for the mysteriousness, activity, and understandability scales. These results suggest that more accurately identified organs were generally perceived as having stronger, more extreme images. (Some of the dichotomies omitted from Figure 2 dealt with uninteresting or unrevealing scales, e.g., size, warmth, and hardness. Other dichotomies produced small differences between organs, e.g., adaptability, sacredness, and durability.)

The results from the last section of the questionnaire are shown in Table 2 where the mean rating for importance (1 = not important, 10 = important), percent of subjects willing to donate that organ, and the mean ranking for willingness to donate each organ (1 = not willing to donate, 10 = willing to donate) are shown. The heart, brain, and blood were ranked as being important whereas the cornea and pancreas ranked low in importance. At least in the case of the pancreas, the low ranking of importance may have been related to the low percentage of subjects that could correctly identify the location and function of this organ.

As might be expected, a large percentage of subjects indicated a willingness to donate blood. A relatively large percentage of subjects also were willing to donate a kidney. Willingness to donate the remaining organs was expressed by approximately half the subjects, with the donation of brain tissue having the lowest percentage.

FIGURE 2

SEMANTIC DIFFERENTIAL RATINGS FOR THE THREE ORGAN GROUPS

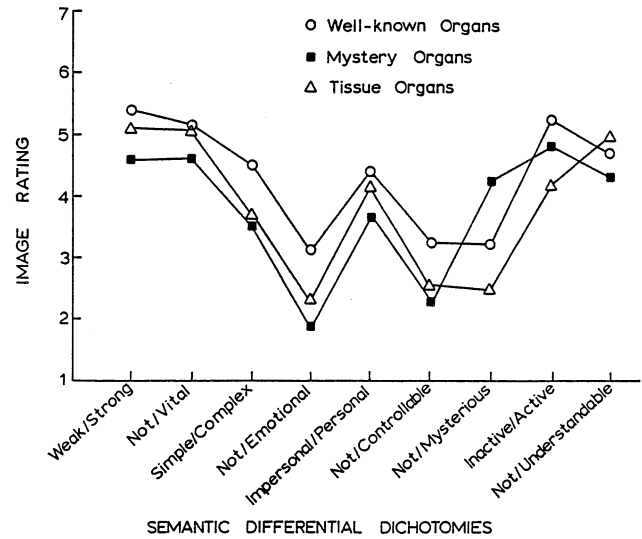


TABLE 2

IMPORTANCE AND WILLINGNESS TO DONATE ORGANS

Organ	Mean Ranking of Importance (10=Important)	Percent of Subjects Willing to Donate	Mean Ranking of Willingness to Donate (10=Willing)
Cornea	2.1	50.7	5.9
Kidney	4.4	79.1	7.5
Heart	9.0	60.1	5.5
Lung	6.9	56.4	4.8
Pancreas	2.7	57.3	4.9
Liver	4.3	65.2	6.3
Bone	4.7	43.5	4.8
Brain	8.8	37.1	2.7
Blood	7.4	92.3	9.7
Skin	4.6	47.2	3.2

Not surprisingly, there was a significant correlation, $r = .94$, $p < .001$, between willingness to donate particular organs (column 3 in Table 2) and rankings of organs for donation (column 4 in Table 2). There was no correlation between the importance ranking (column 2) and the percent of subjects willing to donate, $r = -.05$, n.s. This result suggests that the decision to donate an organ is unrelated to the individual's perception of that organ's importance for normal functioning.

There was a significant difference between male and female subjects in their willingness to donate certain organs. Although the percentages were similar for most organs, females were much less willing to donate the heart (40.3%) and cornea (42.3%) than males (80.0% and 59.4% respectively). Different levels of knowledge cannot account for the male/female differences; both sexes were equally correct in identifying the location and function of organs.

Because of space limitations, only a small amount of the data relating to the image of the organs (as revealed by the ratings on the semantic differential scales) and the willingness of subjects to donate the organ can be presented. Table 3 presents the ratings of selected semantic differential scales for the brain, blood, kidney, and cornea. The table is separated by those subjects who indicated a willingness to donate the organ versus those subjects not willing to donate.

TABLE 3

SEMANTIC-DIFFERENTIAL RATINGS OF SELECTED ORGANS

Scale	Willing to Donate	Not Willing to Donate
Not Sacred (1) / Sacred (7)		
Brain	3.5	5.6
Blood	4.5	5.6
Kidney	3.8	5.0
Cornea	3.1	5.0
Unemotional (1) / Emotional (7)		
Brain	5.1	6.1
Blood	3.5	5.1
Kidney	3.5	3.9
Cornea	2.8	4.8
Not Mysterious (1) / Mysterious (7)		
Brain	5.3	6.1
Blood	3.5	4.1
Kidney	3.5	3.6
Cornea	3.7	4.8
Not Understandable (1) / Understandable (7)		
Brain	4.1	3.0
Blood	4.1	3.7
Kidney	5.2	3.5
Cornea	5.1	4.9

In general, those subjects unwilling to donate the particular organ expressed an image of the organ being more sacred, more emotional, more mysterious, and less understandable than those subjects willing to donate the organs. These data suggest that the images held by subjects might determine willingness to donate specific organs.

General Discussion

There are three issues arising from the present research which deserve further discussion. The first involves the knowledge and image people have of their own organs. The second concerns the relation between knowledge and image, on the one hand, and willingness to donate specific organs, on the other. The third reflects implications of these results for theoretical accounts of consumer behavior. Each of these issues will be discussed below.

Knowledge and Image of Organs

The accuracy results imply the existence of three categories of organs. In the first category are "well-known" organs: cornea, heart, brain, and lungs. Subjects were generally quite accurate in identifying the location and function of these organs. The semantic-differential results revealed that this group of organs was viewed as highly active, strong, and vital, while being moderately complex, personal, and understandable. An exception within this category was the brain which was seen as more mysterious and emotional.

In the second category are the "mystery" organs of pancreas, liver, spleen, and kidney. Subjects were relatively inaccurate in identifying both the location and function of these organs. The semantic-differential results showed that this set of organs was seen as less understandable and emotional and more mysterious. As noted in the Results, the thyroid led to a mix of responses, with an accurate identification of location but not function.

In the final category are the "tissue" organs of bone, skin, and blood. Because these organs are non-uniquely situated, it was not possible to determine accuracy of location. However, the semantic-differential results revealed that this set of organs was rated as more understandable and less mysterious and active. Not surprisingly, bone was viewed as less active, soft, and warm than the others.

The responses to the "catch" organs deserve some comment. Roughly a third of the subjects incorrectly located an abomassum (part of a cow's stomach) on the diagram in Figure 1. Subjects had comparable error rates for identifying the function of a crop (part of a bird's gullet) and the abomassum. Combined with the low accuracy results on some non-catch organs (e.g., spleen), these findings indicate that many people have surprisingly little knowledge of the location or function of their own body parts.

Willingness to Donate

Subjects' willingness to donate various organs was evaluated using two measures: 1) ranking of organs according to willingness to donate and 2) percentage of subjects willing to donate each organ. Despite the difference in measurement procedures, there was strong agreement between the two measures (see Table 2). Subjects were most willing to donate blood and kidneys and least willing to donate brain tissue, skin, and bone.

Efforts to relate willingness to donate to various knowledge measures were marginally successful. There was no relation, for instance, between rankings of importance and willingness to donate specific organs. In particular, subjects considered the heart and brain important, but were unwilling to donate them; conversely, they also considered blood to be important and were quite willing to be donors. Perhaps this can be explained, in part, by the difference between donations which presuppose death (e.g., heart and brain tissue) and those that do not (e.g., blood).

The relationships between accuracy of location/function and willingness to donate were somewhat stronger, but failed to reach significance. Cornea and heart, for instance, were identified quite accurately but were only moderately likely to be donated. Kidneys, on the other hand, were high on the list to be donated but could be accurately identified by half the subjects.

In contrast to the knowledge measures, there were some notable differences in the semantic-differential measures of image as a function of willingness to donate for specific organs. Those subjects unwilling to donate their brain tissue, blood, kidney, and cornea considered them to be more sacred, emotional, mysterious, and less understandable. Similar but less extreme patterns were observed for other organs.

Implications for Consumer Behavior

There have been relatively few studies of organ donation from a consumer-behavior perspective (or from any other perspective for that matter). Nonetheless, the topic is relevant both because it is inherently interesting and because it offers a relatively unique opportunity to evaluate the usefulness of several consumer behavior concepts.

One concept that has been applied to analyses of organ donation has been that of self-image. Belk and Austin (1986), for instance, found significant relations between willingness to donate and various measures of self. The greater an organ is identified with self, the less an individual is willing to donate. Similarly, Pessemier, Benmaor, and Hanssens (1977) reported that living donors who placed less importance on body image were more likely to donate.

The present study extends these previous findings in two directions. First, the concept of organ image was explored from a somewhat different direction. By using a series of adjective dichotomies in a semantic-differential format, a "profile" of each organ could be constructed. These profiles revealed the presence of important differences between how people think about their organs.

A second extension from prior research was the examination here of both image and knowledge about organs. Somewhat surprisingly, there appeared to be relatively little relation between these two types of measures. Whereas the various image messages were predictive of willingness to donate, there was no significant connection between knowledge measures and willingness to donate. Thus, being a donor appears to be related more to what we feel about organs than what we know about them.

The inability of the cognitive knowledge measures to predict organ donation was unexpected. Most accounts of consumer behavior from either a high-involvement hierarchy-of-effects model (Lavidge & Steiner 1961) or a low-involvement learning model (Krugman 1965) agree that cognition is central to commitment to action. Yet, organ donation appears to be a behavior that occurs in the absence of a significant cognitive component. This may, of course, reflect the use of inappropriate cognitive measures in this study. There is, however, collateral evidence to support the absence-of-cognition interpretation.

The failure to find cognitive correlates of organ donation was supported by interviews with committed donors. When asked why they signed organ donor cards, subjects responded that "it was simply the right thing to do" or "I gave it no thought--I just did it." Similarly, those who donated kidneys while living reported "there was nothing to think about" and "it was the natural thing to do" (Fellner & Marshall 1981). Such comments suggest that organ donors think little about their behavior. They donate because it "feels right."

Another line of supporting evidence comes from subjects' comments after completing the extensive McIntyre et al. (1987) survey on organ donation. Signed organ donors indicated that they had learned a great deal after filling out what was intended to be a neutral, non-informational questionnaire. This illustrates that committed donors have apparently thought little about their actions. The seeming absence of a cognitive component for such an important behavior presents interesting challenges to conceptions of donation behavior specifically and to consumer behavior generally.

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ABSTRACT

CONSUMPTION PATTERNS

This paper expands on a theory, using the concept of the consumption pattern, which can help consumer researchers understand some of the dimensions that determine the meanings of consumption for the consumer, and presents some of the findings from a qualitative research to test for the historical transformations along the dimensions of consumption patterns.

INTRODUCTION

There is a growing concern among consumer scientists that studies in the field of consumer behavior have largely concentrated on a rather limited domain of consumer behavior. This domain is one of buyer behavior (Arndt 1976; Belk 1984a; Holbrook and Hirschman 1982; Olson 1983). In his position paper, Belk (1984a) lists a number of critical differences between consumer and buyer behavior. Recently, criticisms of the traditionally received methodological and theoretical orientations in consumer behavior have also been heard (Anderson 1983; Belk 1984b; Dholakia and Firat 1980; Firat 1984; Holbrook 1984; Levy 1981; Zaltman and Bonoma 1984). There seems to be a general call for new theory development that expands the field of consumer behavior to include meaningful and interesting facets of such behavior even if there is not a direct link to buying activities of consumers or to practical goals of marketing organizations. These may be behaviors related to consumers' total being, life patterns, satisfaction, feelings and purpose in general, and to the meanings (symbolic or otherwise) attributed to consumption. Potentially, this is a movement within the discipline to become independent of its traditional audience and social role, and move towards gaining the status of an independent social science discipline.

There are several directions one could possibly take to advance towards the goal of this new movement. As in the examples of work by Holbrook and Hirschman (1982) on fantasies, feelings, and fun, and Hirschman (1983) on art and ideologies, one could purposefully concentrate on consumption behavior that does not necessarily require purchase transaction. Or, one could work on developing explanatory and descriptive studies of phenomena related to consumption of groups or communities in society rather than on individual purchases of products. A third direction is to study the underlying common meanings and similarities in consumption across social class, culture, reference groups, and individual households to understand consumer behavior in its entirety. Interest in purchase behavior at the individual level has necessarily emphasized brand choice (Belk 1984a; Firat and Dholakia 1982; Olshavsky and Granbois 1979). Furthermore, for historical reasons, the interest of the traditional audience of the consumer behavior discipline--marketing organizations--has been primarily in brand choice. From a consumer behavior perspective, however, choices at more aggregate levels, and therefore, the similarities in consumption behavior are just as interesting and important as are brand choices and the differences. In a way, Levy's (1981) article on consumer mythology could be interpreted as one attempt at such understanding of the similarities in consumers' consumption experiences through the societal generalization of meanings that products represent.

This paper, by expanding on the possible directions just mentioned, will present a discussion of consumption patterns, a concept that might help consumer researchers to grasp the totality of the consumption experiences, and construct new theories regarding these experiences.

Each product, as we well know from the marketing literature, represents, for the consumer, meanings beyond its physical and chemical dimensions and its core utility (Levy 1959 and 1981). Each product is a bundle of attributes. Many of these attributes relate to symbols and meanings only indirectly related to the actual object of the product. They represent status, aspirations, feelings of belonging, achievement, uniqueness, high-life, etc. (Ellul 1964; Touraine 1974; Veblen 1899). While this is especially true with products and services that are major investments or durables, even consumption items in the categories of food and clothing can become such representatives if they possess certain characteristics that make them an integrated component of a distinct life pattern. As is well articulated in Levy's major article (1981), products take on meanings not independent of, but as a part of an overall life style. Eventually, these products become perceived by consumers as the necessary items to have in order to attain a certain life pattern; with time, this distinct life pattern may diffuse widely within society.

Consumption patterns (from here on, CPs) are highly related to life patterns. A CP constitutes that part of a life pattern which is generally considered as consumption activity. Products that are consumed fit into this pattern and acquire their meanings as a result of this fit. Once this social meaning is acquired, the product becomes the representative of a certain CP, however, its purchase and consumption, in turn, reinforces that particular CP. Thus, the historical acquisition of the meanings by representative products and, as will be discussed, development of patterns through the social and cultural process, complete a mutually supportive and enhancing cycle.

As can be surmised from the brief introduction above, a CP defines, and is, a set of relationships and experiences a consumer becomes involved in during the act of consumption. CPs evolve and transform with social, economic, political, and cultural histories of societies. Usually, CPs represent common experiences of a majority of consumers in society, due to the fact that their formation and transformation are closely linked with the socioeconomic history and structures of society (Firat and Dholakia 1982). As such, at a certain point in time, one CP can become dominant in a society, diffusing to more and more households and aspired to by many. This is especially true in our time in societies that have achieved a high level of industrial development enabling high levels of material production and mass markets. The high level of diffusion of many durables and other products, that are so much a part of a distinct life pattern, within the US society, for example, is a possible indication of this as will be discussed later. To understand the concept of CP and bring some insight to the formation and transformation of CPs, a brief discussion of the historical developments in consumption relationships and experiences is in order.

Historical Trends in Consumption

Some of the major transformations and trends in consumption apparent through the last few centuries could briefly be listed as:

1. Consumption activity has been largely separated from production activity. The times during the day (and the week, and the year,...) when we participate in "productive" endeavor and in "consumptive" activity are greatly demarcated. Earlier, work and play (recreation) were basically the same, or as some would put it, play did not exist, mostly due to the fact that everyone in the household had to participate in production, and rather

constantly, for a decent livelihood in the hunter or agrarian societies (Cameron 1973). More and more, both the activities of work and play (similarly, production and consumption) and the times these activities are performed have become differentially defined (Applebaum 1984; Braudel 1977; Udy 1970).

2. Along with the above demarcation in time between production and consumption, a demarcation in place has also occurred. With the development of capitalism and the industrial revolution, a separation between the workplace and the home has also taken place; with the home being the domain for consumption and the factory, etc., the domain for production (Wallerstein 1974; Polanyi 1977). Thus, consumptive activity has been differentiated: Consumption proper at home or at other organized places of consumption, such as the restaurant, productive consumption at the workplace. The development of the organization of production in larger scales outside of the home has had important effects on the consumption experiences of consumers, and possibly on their perspectives of life and life patterns.

3. These separations of consumption and production in time and place have occurred rather abruptly for many consumers in society during the industrial revolution, but at the societal level, it has been an evolution that is still taking place (Fraser 1981). With time and the diffusion of the market system to many facets of life, productive consumption activities at home and within a household subsistence economy, such as, crafts and arts, garden and home agriculture, cooking from scratch (bread, etc.), knitting, weaving and tailoring, construction, washing and mending (Weber 1976), have given way, more and more, to substituting such activities at home with products bought in the market--ready cooked meals, washing machines, dishwashers, television sets, pre-fabricated homes, etc.

4. While these general trends were occurring, the immediate experiences for different social classes, groups and cultures have been somewhat different. At the beginning of industrialization there were "free" and "slaved" laborers, merchants, small craftspeople, the aristocracy, the landowners and their servant class, among others. Different classes had developed different consumption experiences and relationships, and different consumption values, as well as different consumption/production combinations. To give an example without turning this paper into one about history, the aristocracy had developed a totally consumptive experience, living lives of socializing and filling their residences with pieces of toys and gadgets basically for pleasure or as ornaments. On the other hand, some merchants and small craftspeople endeavoring to become industrialists, bankers, etc., had developed, what Weber called, the Protestant ethic; careful and prudent in their consumption. At the same time, the slaves, servants, peasants, etc., consumed only the bare necessities, their consumption largely controlled by their masters (Cameron 1973; Franklin 1969).

One of the major consequences of consumption based on market exchanges has been the socialization and communalization of the consumption experience. Today, no such clear-cut, demarcated differences remain in what consumers consume. The mass market has made all consumption items available in society apparently, if not actually, accessible to all groups and classes. This, of course, is especially the case in the developed market economies. Consequently, we see major consumption items diffused to the majority of households in every socioeconomic stratum. Examples are automobiles, washing machines, television sets, sound systems, refrigerators, designer clothing, frozen foods, etc. While many differences still remain in the cultural characteristics, incomes, work experiences, social classes, and social images of consumers, the market system creates an apparent equality within the domain of consumption.

It is, by now, well known how the changes in consumption briefly discussed above corresponded to changes in family or household structures. The extended family--which according to some was a misplaced conceptualization of large families that resulted from a need for labor for the

household economy (Cherlin 1983)--has, with the advent of industrialization and other developments, diminished in size. Concurrently, relationships among family members have structurally changed. With these changes, and with greater dependence on standardized, made-for-market products (tangible and nontangible) for household consumption, the consumption experiences of individual consumers (households) have surely changed. This is rather obvious. But, as in a "consumer society" life depends on and is constituted of the consumption process to greater and greater degrees, the changes in consumption have a much wider impact than on just consumption experiences. Relationships that consumers have with each other during consumption, the market itself, and the products procured in the market become paramount for the total life experiences of consumers. They influence the totality of meanings and values that life has for human beings, not just buying behaviors and attitudes. As such, it is important to observe and understand the consequences of the transformations in consumption in their entirety, as they impact upon and correspond to the life patterns and experiences, philosophies, ideologies and emotions of human beings in general. Studying such impacts within the limited frame of buying and consuming is a mechanical and narrow rather than a holistic approach, and is likely to result in a loss of sight of the total reality.

The rather mechanistic managerial approach to consumer behavior has concentrated heavily on the behaviors and attitudes consumers display as they purchase products. These are relatively easily measurable appearances, reflections, and expressions of deeper essences of the human experience. Such essence has not yet been studied in any substantial or systematic manner. To achieve such analytical understanding of the consumer being as a multidimensional human system, initially a deeper and analytical interpretation of the apparent and surface relationships, objects and behaviors--those that have been observed and measured, yet left at the concrete observation level--is necessary. In this vein, the efforts at interpreting consumer mythology (Levy 1981), underlying dimensions of products (Hirschman 1981), and nonbuying behaviors (Holbrook, et al. 1984; Venkatesh 1984) should be welcome.

Along these lines, it is possible to discern, in the widely uniform consumption experience that originated--and that is still developing--with the transformation to the capitalist market exchange system in the West, some underlying relationships and themes. These relationships and themes are reflected in the way products are consumed, similar to Hirschman's (1981) symbolism and technology dimensions, as underlying dimensions which render certain products representative of an increasingly dominating CP. These dimensions of the CP will be briefly discussed and their implications for the life experiences and mentalities of the consumers will be considered.

The Social Relationship Dimension

One of the major transformations due to the trends earlier discussed has been in the social relationships in consumption. Following the trend from extended families to nuclear families which reduced the collectivity of consumption, the trend is towards individualization of consumption activity. The development of products, such as, automobiles, single family homes, television sets, and washing machines has aided in separating the consumers (households) from each other in their consumption activity, and has reinforced the reduction of interdependence among individual consumers and households that had already developed as a consequence of a labor market which had individualized work and earning for livelihood. The sharing, dependence upon each other for consumption, and therefore, collective consumption activity, has been diminished. Each consumer is now able to subsist and provide for consumption within its own nuclear household. The necessity for interaction and social relationships among consumers has been minimized by the structure of society and the CP.

The trend continues towards further individualization with a television set for every member of the nuclear family, frozen dinners and microwave ovens, more than one automobile families, etc. The relationship within households are, thus, becoming further individualized as well as among households.

The Domain of Availability Dimension

The individualization of consumption required that products which were part of the consumption process be available to individual consumers. The extension of this necessity and the success of the market economy further led to privatization of these products. Rather than individually use products that were available to all consumers (e.g., public telephones), the control of these products by each consumer was increased when the consumer owned the products privately; so that each consumer had the product to consume, and that single product (e.g., the telephone at home) was available to and under total control of that one consumer (household). Thus, the privatization of products, through direct and singular ownership, where each consumer could make a separate purchase in the market increased. Products so purchased became private rather than public products; their availability was private, and this helped the extension and expansion of the market system.

While privatization of availability of products facilitates individual consumption, private and individual consumption are not the same. Public products, such as, public transportation vehicles, movie theatres, museums and parks, while available for public use, are nevertheless consumed individually. That is, there is generally very little or no social interaction among the consumers during their consumption of these public products, and basically no collective decision-making, or planning of activities is present. In understanding these first two dimensions, it is important to recognize their difference.

The Level of Participation Dimension

A common observation in contemporary consumption is:

In American society, people often satisfy or believe they can satisfy their socially constituted needs and desires by buying mass produced, standardized, nationally advertised consumer products (Schudson 1984).

This recognition implies a transformation in society from a social dependence--i.e., a direct dependence on other human beings--to economic dependence--i.e., dependence on products of human labor produced for and procured in the market. While these products may be differentiated in their features, styles, and other secondary attributes, as Schudson points out, they are highly standardized in their basic constitution. Consider, for example, all the different brands and style of automobiles or television sets. While there is much difference and choice at the brand level, at the product category level the norm is similarity. The basic uses of these products are also highly standard given the present structure of--e.g., North American--society. Consequently, as more and more consumption activity becomes dependent on such products purchased in the market, the standardization and similarities in the consumption activities of consumers increase. This is due to the fact that the products with standardized characteristics and ways of use impose upon the consumers patterns in which they are to be consumed. That is, the "rules of the game" are given by the products in the market. Products for the market are necessarily standardized, since they have to fulfill the need attributes perceived by at least a homogeneous minority. The market is necessarily unable to provide total heterogeneity, and its success depends upon the fact that the cultural structure of society achieves homogeneity in major respects and minimizes deviance. Interactively, the market itself becomes part of that homogenizing process. As this process takes place, the singular participation by the individual consumer in what the rules of the game will be in consumption

of the largely standardized products is diminished. Thus, there is an increase in similarities of life patterns as the proportion of products purchased in the market grows within the consumption packages of consumers. For example, the life patterns in less developed countries that have less developed markets exhibit greater variance in both quality and kind (Amin 1982; Baran 1957). The level of participation of individual consumers in the transformation of CPs is determined by the processes by which this transformation occurs. This process will either alienate large proportions of the consumers, or lead to synergistic participation. The pattern that develops, however, is likely to significantly influence the affective and cognitive states of consumers regarding many aspects of life.

The Human Activity Dimension

The increased dependence on products purchased in the market has a further effect on CPs: as human labor is substituted by these products, the level of human activity in consumption is decreased. The consumers become passive physically and mentally in the consumption process as consumption activity is mechanized and automatized increasingly by the standardized products purchased in the market. Many highly diffused household products, such as, television sets, microwave ovens, washing machines, dishwashers are perfect examples. These products enable a trend from active to passive consumption.

Lately, growth in interest in sportive activity, such as, jogging, etc., due to rising health consciousness, is a reaction to the trend towards passive consumption in North American society. However, this interest in active consumption has not diminished the dependence on products that represent passive consumption in other facets of life, rather it has developed along with it.

The developments in capitalism and industrialization, discussed earlier in this paper, are then accompanied by corresponding changes in the CP. This transformation, along with the increased importance of consumption in human life, has resulted in extremely interesting transformations in life patterns and the philosophical, attitudinal, and perceptual orientations in human society. Therefore, recognizing the transformation in CPs is important for understanding consumer behavior.

TRENDS IN THE DOMINANT CONSUMPTION PATTERN

Human life, judging by all indications from the social sciences and the history of human experience, is multidimensional. Human beings have a social, psychological, political, economic, biological, ecological, etc., existence. As was indicated earlier, of these dimensions the economic dimension has received the greatest emphasis and interest in human society at least since the industrial revolution and the beginnings of the capitalist era. Some have argued that this emphasis on one dimension might have created the one-dimensional person (Marcuse 1964). Such emphasis on a single dimension of human experience is likely to cause imbalances and/or create substantial transformations in human life and how it is perceived.

The economic dimension defines the quality and extent of relations human beings have with the products of their labor; hence the growth in this dimension means greater dependence on these relationships. Since the growth of the market exchange system, industrialization, and capitalism, these relationships are increasingly mediated through the market. Therefore, the developments in the dimensions of CPs, greatly influenced by the structure and processes of the market, are not totally coincidental. The importance of this economic dimension and its contemporary mediator, the market, greatly influence the perceptions, beliefs, ideas, and culture of human beings. These influences, then, impact upon the remaining dimensions of human life, as human experience is not a fragmented but integrated multidimensional experience. This influence shows not only on how much development takes place along other dimensions, but also on how these dimensions are

interpreted, perceived, and socially and/or subjectively constructed.

The transformations along the dimensions of CPs discussed are also affected by the growth and importance of the economic dimension in human society, and by the growth of the market exchange system. The market thrives on exchanges, and in a market economy continued livelihood of exchange requires voluntary participation in exchanges rather than coercion. Voluntary participation, however, is determined by ideological and social interaction, and persuasive communication is a major element in such interaction.

Both exchange and persuasive communication are extremely personalized and individualized phenomena since in the last analysis, for exchange and persuasion to occur, personal decision and conviction are required. Furthermore, since exchange is predominantly based on monetary exchange in contemporary markets, it is greatly materialized. It is overt and very tangible. These characteristics of contemporary market exchange, along with the dominance of the economic dimension reflect upon other dimensions of human life, individualizing and materializing relationships along these dimensions as well, and lead to the perception on the part of the individuals that these relationships are also largely dependent on an exchange process. In turn, this mentality influences and determines to a great extent the human approach to life, society, and values.

We are, as a result, living in a society where individualization, and to further this effect, privatization in consumption increase. It is likely that, given this trend, products that further individual and private consumption are going to be the most successfully marketed products for some time to come. Personal computers and television/home shopping are more recent examples of this trend.

As the discussions on the dimensions of CPs and their interactions indicate, the CP presently dominant in advanced market economies is individual-private-alienated-passive. This CP is becoming further established in such economies and is diffusing to other market economies. Qualitative research carried out to test the presence of such a trend has provided strong support of its existence. The research and its results are briefly presented below.

QUALITATIVE RESEARCH

The relationships along the dimensions which define CPs are represented in different consumption categories by products that enable reproduction of the relationships unique to the certain CP. The research reported here was conducted to find out if products highly diffused in contemporary North American society were positioned by consumers consistently towards the individual-private-alienated-passive ends of the dimensions of CPs in relation to products that were popular in this society in the past. Such consistency would indicate a trend towards an individual-private-alienated-passive CP.

Research Methodology

The first task of the qualitative research was to compile a list of products and consumption activities popular in society in the past and in the present. To remove any bias in the list, two hundred randomly selected respondents from a small but cosmopolitan town in Southeastern U.S. (population 28,000) were asked to list products and consumption activities they perceived to be widely used during three periods: (1) before the second half of the nineteenth century, (2) late nineteenth century and first half of twentieth century, and (3) last three decades and present. These lists were, then, evaluated by three independent judges to develop the combined list finally used in the research. The judges finalized the combined list by eliminating items mentioned very infrequently, and by deciding on common names for items which the respondents mentioned often, yet used different labels. This process produced twenty seven items to be used.

Following the identification of the items to be used in the research, a measurement instrument was developed using six figures. Each figure was a combination of two dimensions from the four dimensions of CPs discussed earlier. There were two major reasons for developing the figures in such a manner. First, a four dimensional instrument would have been impossible to handle by the respondents. Second, though unidimensional figures might have made it easier for the respondents to position the items along a single dimension, the care with which they were positioned by each respondent would have been difficult to evaluate. When the items were positioned within two dimensional figures, it was possible to check the consistency for each respondent since each dimension appeared three times in the six figures. To ensure that the respondents did not have time to go back to the figures they had already completed to check for this consistency themselves, they were given only two hours before the interviewer went back to collect the instrument. For a large majority of respondents, the interviewers had to wait for another hour for completion.

The respondents were male or female heads of two hundred and forty (240) randomly selected households from the same Southeastern U.S. town. Each respondent was given a packet that contained (a) descriptions of the four dimensions without reference to any single product, (b) an example of positioning the products within the figures using names A, B, and C, (c) the six figures to be filled in by the respondents, and (d) an alphabetically ordered list of the twenty seven items. The interviewers then asked the respondents to position the items within each figure following the instructions, and told them that they would be back to pick up the instrument in two hours. If the respondents required help or had problems when the interviewers returned to pick up the instruments, they were given further instructions, again without specific reference to products. If problems persisted in the completion of the measurement instrument, the respondent was replaced with another randomly selected respondent.

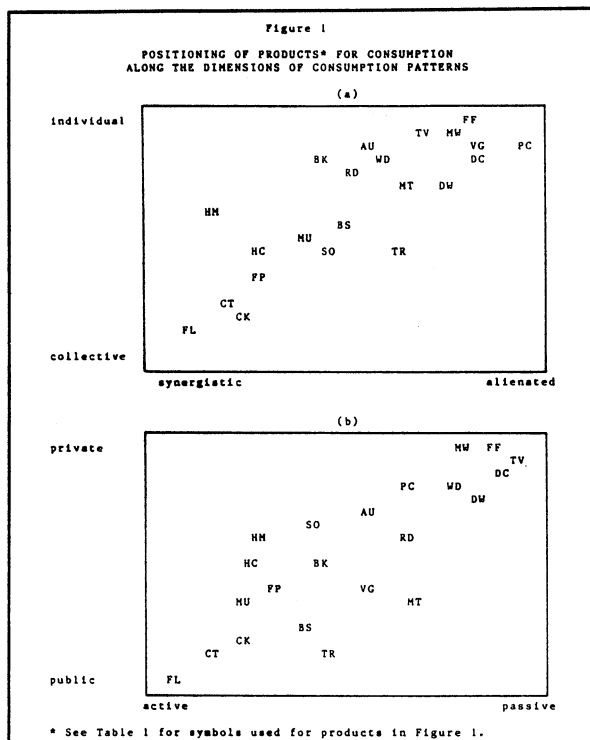
Five out of the twenty-seven items listed (main-frame computer, cordless telephone, Turkish bath/Finnish sauna, social-club meeting, prepared foods) were eliminated from the research because a sizeable proportion of the respondents (20%) did not have a clear idea of what these products were. As a result, the research was completed with twenty two items (Table 1).

Table 1
SYMBOLS FOR THE 22 PRODUCTS USED IN THE RESEARCH

AU	=	Automobile
BK	=	Book
BS	=	Bus
CK	=	Community kitchen
CT	=	Community (participatory) theater
DC	=	Designer clothing
DW	=	Dishwasher
FF	=	Frozen foods/TV dinners
FL	=	Folklore
FP	=	Family picnic
HC	=	Home-cooked meal
HM	=	Hand-made clothing
MT	=	Movie theater
MU	=	Museum
MW	=	Microwave oven
PC	=	Personal computer
RD	=	Radio
SO	=	Stove/oven
TR	=	Train
TV	=	Television set
VC	=	Video-game arcade
WD	=	Washing machine and dryer

Once all the instruments were collected, the positionings by individual respondents for each product in each figure were measured along the two coordinates using a ruler and recorded. Then, for each figure, the mean positionings for each item were calculated. Figure 1 exhibits the rough mean positionings of the twenty two items in two of

the six figures by the two hundred forty respondents to show the positionings along all four dimensions. Positioning along the four dimensions are completely consistent for the six figures.



Other figures and information on this research are available on request from the author.

Results

The results indicate that products that are popular at present in society are consistently positioned towards the individual-private-alienated-passive ends of the dimensions. This consistency is found not only when the mean positions shown in Figure 1 are calculated, but also in the positionings by the individual respondents. When the relative positions of the products in individual responses were compared with the relative mean positions calculated, it was found that the relative positions from the two hundred and forty responses were almost never violated. The highest number of violations of relative positions in a single two-dimensional figure was 148. This is extremely low considering that there are 5,280 (240 respondents times 22 products) relative positions that can possibly be violated. This indicates an extremely high level of agreement in respondents' positionings of the products.

Clearly, the products used in this research are by no means exhaustive. However, given the manner in which they were generated, it can be claimed that they represent the products that most represent our life experiences as perceived by the consumers themselves.

CONCLUSIÓN

Changes along the dimensions of CPs in the direction of individualization, privatization, alienation, and passivation will impact upon the human psychology, ideology and society. These changes transform the meanings consumers acquire and have in their consumptive activities, and affect the meanings they find in life. These impacts must still be studied from a consumer science perspective, however, the effects of the contemporary CP are already widely recognized in different literatures. Psychological problems which result from individualization and the resulting new interpersonal relationships, problems of

identification through products owned and dependence on products, anomie and disinterest due to alienation and loss of control over one's life are some of the negative effects which have, at least partially, their root in the transformations along the dimensions of CPs that have dominated life in advanced market systems.

To understand the holistic consumption experience these and other possible underlying dimensions create, their evolutions and causes need to be studied. Such studies will enable us to understand, for example, the reasons behind increased expectations of efficiency in housework and the growing physical and psychological pressures upon women both at home and at the job despite the time-saving household appliances (Acker 1978; Ehrenreich and English 1979; Moore and Sawhill 1978; Vanek 1978). They will enable us to understand why such appliances are equally consumed by households that have one versus both spouses employed outside the home when income differences are accounted for (Firat and Lewis 1985). Further, we can get insights into how worldviews and philosophies, and meanings of life have become so interwoven with not so much what people do but with what they consume.

The purpose of this paper has been to make an effort to begin to understand such essences of phenomena underlying consumption. To this end, several theoretical conceptualizations were presented and results from a qualitative research were briefly presented. Further discussion on these points, and arguments for and against extending the framework will hopefully improve our understanding of the human condition to an extent not yet achieved.

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Abstract

There appears to have been a transformation, in part, from a materialistic, market-driven status symbol system to one that is experiential in character. Objects are still involved since experiences, *per se*, are seldom visible; but the status symbols (objects) evolve because they connote a meaningful use of leisure or "reveal taste", not necessarily wealth. Cultural objects and cultural experiences play a major role in this taste-revealing process for all statused persons, but especially for those who are newly-statused: those who may be insecure about their ability to display taste without substantial assistance from sources where taste is indisputable (i.e., cultural institutions).

"...revealed taste is therefore as important to the consumer and to his audience - as revealed income or wealth." (Roger S. Mason, 1981) (Conspicuous Consumption)

Introduction

The recognition that products and services have intangible, non-functional attributes is not new (Levy 1959; Engel et al 1978; Holbrook & Hirschmann 1982). Neither is the recognition that products and services may have symbolic dimensions (McCracken 1986; Holman 1980; Hirschman 1980; Rook 1984) - even status-symbolic dimensions (Csikzentmihalyi and Rochberg-Halton 1981; Packard 1961).¹ Such recognition is reflected in advertising appeals and advertising context for a wide range of goods and services. And, up to a generation or so ago, status objects and status-signalling behaviours were well-documented by marketing researchers, social scientists, and social critics (c.f., Martineau 1958; Warner, Meeker and Bells 1949; Packard 1961). Perhaps less widely-recognized are the major changes that appear to have since occurred with respect to the set of goods and services that have status-symbolic significance as a consequence of the technological (or post-industrial) revolution, and the manner in which status-signalling occurs among those who possess or aspire to status in technologically-advanced social systems.

There has been a transformation, in essence, from a materialistic, market-driven status symbol system to one that is in large measure experiential. Objects are still involved since experiences *per se* are seldom visible (i.e., apparent after-the-fact to significant others), but new objects have evolved as status-signalling devices not because they are costly but because they are linked, by both signaller and "audience," to status-symbolic experience (i.e., possession of the object implies that one has had an experience of ritual significance). (McCracken 1986; Rook 1984; Levy 1959ff) The specific status symbols (objects) evolve because they connote a meaningful use of leisure or reveal "taste", not necessarily wealth (Mason 1981). Cultural objects and culture experiences ("high" cultural objects and experiences in the sense that Gans (1974) defined the term) play a major role in this taste-revealing process for all statused persons, but especially among those who are newly-statused, and who may be insecure about their ability to display taste without substantial assistance from sources

where taste is virtually indisputable (e.g., cultural institutions). (Levy, Czepiel and Rook 1981)

The major changes alluded to above are a consequence of the redistribution of wealth and the redistribution of leisure time. Documentation of those changes is much too involved to present here, but is discussed from a variety of perspectives in the social science and popular literatures (c.f., Blumberg 1974; Mason 1981; Kelly 1983 and 1986; Brooks 1981; Linder 1970; Lipset 1979).

Redistribution of wealth has made available to a majority of the population market objects that were previously only available to an economic elite, rendering the status symbol system based upon market value alone highly ambiguous. This exemplifies what Blumberg (1974) has termed a "Gresham's Law of social status symbols."

Leisure, in the sense that Veblen (1899) employed the concept, has not simply been redistributed but totally inverted. (Linder 1970) Owners and managers, because of the character of the new information-processing technology, must devote vast amounts of time to their occupational tasks. The traditional working class, by contrast, have a great deal of leisure time, even if they are fortunate enough to be employed. (Mason 1981; Brooks 1981; Lasch 1979) So, if leisure is to be an indicator of status (and evidence suggests it still is), it will be the quality rather than the quantity of leisure that matters.

This paper represents an examination of an evolving, experientially-based status symbol system and the role of cultural experiences and cultural objects in that process. While conceptual in focus and to some extent speculative, it is based upon five years research by the author in museums and galleries in North America and Western Europe, and on the work of others in areas including anthropology, sociology, museology, the performing arts, consumer behavior, cultural tourism, and social criticism. Presuming the status symbol system is evolving as suggested herein and the roles of cultural experiences and objects what they seem to be, there are major implications for the marketing of cultural goods and services - and, perhaps, for the broader area of consumer marketing as well.

High Culture and the Social Elite

No set of discretionary activities are so exclusively associated with the statused as cultural events.² (Sexton and Britney 1980; Mason 1981) Regardless of the country or the cultural activity involved, it is primarily the social, intellectual, and economic elite who attend (Dimaggio, Useem and Brown 1977; Belk and Andreason 1980; Bourdieu 1984) Findings from three recent museum visitor studies in which the author participated (i.e., Vancouver and Ottawa, Canada, and Geneva) further reinforce this generalization. Visitors were, compared to the population at large, extremely well-educated and in occupations both highly-paid and highly-regarded. (Curtis and Scott, 1979) One suspects this is true in part as a residual of the Veblenian era when those who inherited wealth and status engaged in conspicuous consumption; that is, "...pragmatically useless forms of consumption requiring

¹ "Status" is used in this paper in the sense that Max Weber (and, subsequently Veblen, Durkheim, Merton, Parsons and others) employed the term. That is, as a reflection of an honorific rather than a material-possession scheme for social stratification. (Lipset 1979)

² "Cultural" events, for the purposes of this paper, include museum and gallery visiting, opera, symphony, ballet, and the legitimate theatre; also included may be "cultural tourism" - destinations or destination activities that have a strong cultural component (e.g., Paris, for its vast array of cultural institutions or Indonesia, for its exotic burial rituals).

many years to learn," (Veblen 1899) and partially the consequence of those who have more recently acquired status and who are trying to live up to the stereotype (i.e., to be status congruent), whether they have "learned" the form of conspicuous consumption or not.

A great deal of education and/or socialization is required to truly appreciate high culture. Whether artistic, or social, or cultural context is to be appreciated, some "academic" model is involved. Bourdieu and Passeron (1964) have gone so far as to observe that education and culture in France are a means to preserve or widen existing systems of social inequalities. Whatever the case, one cannot confront a cultural object "cold" and get much pleasure or meaning from it; one must already possess certain information to make the experience meaningful.

Major Segments of Cultural Consumers: Trads and Technos³

Following from the distinctions described in the preceding section, two segments of cultural consumers are suggested. For convenience, those segments will be referred to as Trads and Technos. This is not a true dichotomy, of course, since most stasused persons will possess at least some qualities characteristic of each group. Over time, many of those labeled Technos likely acquire by repeated exposure and/or study what they did not receive through socialization. And, among those given every opportunity to "inherit" a love for the arts, there are many who either have very superficial cultural experiences or avoid such experiences all together.

(1) Trads: Cultural objects and experiences have played a major status-symbolic role since well before the technological or post-industrial age. (Veblen 1899) Through socialization, those inheriting status have acquired "taste" (culturally defined) and a sense of proprietary obligation towards cultural institutions. (Farber 1971) They have also, by their patronage, defined participation in cultural activities as "meaningful leisure" (Csikzentmihalyi 1981) and as an appropriate public activity for persons enjoying status (Levy, Czepiel, Rook 1981). Almost all persons inheriting status are given the opportunity for higher education - often in the arts and humanities (i.e., lacking a job-related focus)

(2) Technos: Those who are newly-stasused are much less likely than the Trads to have been either socialized or educated to enjoy high culture. While they have had equal or greater educational attainment, their areas of study were more likely designed to serve the technological revolution (e.g., engineering, the sciences) than arts or humanities where one may learn to enjoy the arts. (Kelly 1986; Mason 1981) After all, the newly-stasused were awarded status by society precisely because they developed skills of value in the technological age. (Lipset 1979)

Both Trads and Technos are stasused (accorded respect and rewarded by society) according to contemporary studies on social stratification (c.f., Felson, 1976; Kohn, 1977): and both types also are represented among the participants in cultural activities. Group 1, the traditionally stasused, are more likely to engage in cultural activities because they enjoy the activities. Group 2, the Technos, are culture consumers because they feel the need to live up to the stereotype, to achieve status congruence - to have had certain status-symbolic experiences.

Trads and Technos both "use" cultural activities and the evidence of participation (objects/markers) as symbolic evidence of their status (MacCannell 1976). These objects are displayed on their persons, in their work-

places, or their homes. They (symbolically) say to those who matter to the signaller, "this is what I have done," or "this is the sort of person I am", or "these (objects) are representative of my level of sophistication (or taste)." The displayed objects connote rather than denote position: the experience is status-conferring while the object is status-signalling. According to Carpenter (1973), the marker-object "...helps convert given reality into experienced reality." Not all experiences require markers, of course. Some cultural events are so highly visible - so widely reported through the media - that ones significant others are immediately aware if one has been a major participant.

From the perspective of anthropologists, engaging in cultural activities may constitute a form of transformation ritual (rite of passage) or pilgrimage. Moore (1980), for example, draws a very elaborate analogy between cultural tourism and a trip to Mecca. The objects or markers associated with that "ritual" constitute relics of a sort; they are very strongly associated with a given activity by both an individual and his/her significant others and they signal changed status on the part of their possessor. The objects, called "markers" by MacCannell (1976), are much more than souvenirs; there are many potential souvenirs for any given sight/activity but very few objects that provide indisputable (and tasteful) evidence of having been. Objects such as a catalog from the Renoir Exhibition clearly marked with the imprint of the Grand Palais and dated August, 1985, for example, are far more significant, symbolically, than a postcard featuring a photo of the Louvre.

Experience markers are not necessarily expensive in the sense that status symbols once were, although they may well represent tangible evidence of a major expenditure. Wealth may no longer be a sufficient condition for high status, but it is usually a concomitant one. (Felson 1976)

According to MacCannell (1976), and several studies based upon his notion of a sight/experience-marker quest, the objects that evolve as cultural experience markers may assume such symbolic importance that they overshadow the actual experience. One illustration of this is provided by the Civil War battlefields at Gettysburg in the U.S. (Machlis and Burch 1983), where a fascinating electronic map of the battlefields designed to orient battlefields visitors has begun to supplant the battlefields as a destination (i.e., people now visit the map but not the battlefields.) Visitors carry home copies of the map of the battlefields as they have always done but, for some, they are now markers of the marker, not the sight. The marker has become the sight.

The Gettysburg map-as-marker was created inadvertently in the "packaging" of a sight. A more deliberate case of focusing on a marker has been provided by the recent travelling Tutankhamun Exhibition. Wall and Knapper (1981) documented the Exhibition during its sixty days at the Art Gallery of Ontario. The Tutankhamun deathmask was used prior to and during the Exhibition as a marker for the Exhibition as a whole, both in the general media publicity and in the material produced in the Gallery. As a consequence, crowds were always greatest in the vicinity of the deathmask and replicas of that object far outsold any other item in the Gallery shop for the Exhibition period - that included \$2800 per day in molded chocolate deathmasks. Only one object was ever employed to symbolize the Exhibition, and that object came to represent the Exhibition both to Gallery visitors and the general public. Having once established the marker, it could be merchandized in many forms, including chocolate. That is "revealed taste" with a vengeance!

The Metropolitan Museum of Art in New York have gone to greater lengths than most museums to select objects for their museum shop that are representative of the Museum, including the appointment of a committee of curators who assess such objects for their "authenticity". That tends to reinforce an already well-established perception - not always correct - that all objects acquired in museum shops

³ These categories correspond roughly to "accorded status" (likely inherited) and "objective status" (attained, awarded based on behaviour) described by Lipset (1979) in his excellent review article on social stratification in North America.

are tasteful and "authentic" (i.e., a true copy of some art object or artifact). (Berger 1972) Their shop grossed approximately \$34.5 million (U.S.) last year (Time, 1985), including a very large portion from catalogue sales, where one may now acquire evidence of having been without ever going.

Despite the MMOA experience just described and the possibilities of "passing" (i.e., pretending to have an experience one has not had), this is much less likely with an experience-based status symbol system than with the market driven system that was in force when Goffman (1951) and Blumberg (1974) discussed the issue. Experiences are much harder to fake than wealth. That is why the experiential system has been adopted by those who possess and wish to maintain social distance. (Farber 1971) Display provokes comments from one's significant others - and attempts by them to compare their experiences to one's own. If one has not actually had the experience in question, one must then either acknowledge that one has not had the experience, or risk being detected in a fraudulent claim. Either way, the purpose of acquiring the object has been frustrated.

Distinctions Between Trads and Technos

"Taste classifies and it classifies the classifier..." (Bourdieu, 1984)

If the only reason a person seeks an experience is to be able to claim one has had it, there is no reason to have it more than once. This suggests an important basis for differentiation between the Trad and Techno segments identified earlier: The former go to an experience because it is inherently attractive to them - they enjoy being there; they may, therefore, return many times to a given experience. Technos, by contrast, are expected to derive their symbolic benefits from having been - so being there does not necessarily provide pleasure and returning for a repeat experience is much less likely than with Trads.

The hypothetical distinctions between Trads and Technos include their markers as well as their experiences. Virtually the whole of the value of a marker/object for Technos may be derived from the status-symbolic significance of that object; if the speculation concerning Technos is valid, the intrinsic function, artistic quality, and cultural context of a marker may be of relatively minor significance. So long as it "reveals taste" in a manner perceived as appropriate to the social stratum with which the Techno associates, personal (i.e., private) perceptions about the tastefulness of an object can be of secondary importance. This is likely the case because Technos are aware they may lack tastes that society has defined as appropriate for them. They are afraid to trust their own judgement and, therefore, rely on the taste of others in whose judgement they have confidence - the curators or producers of cultural activities. This is analogous to the situation described by Rainwater, Coleman and Handel (1959) a generation ago when middle class women with mobility aspirations would either hire an interior decorator or go to a very expensive specialty store to acquire home furnishings rather than rely on their own taste. Curators appear to be the interior decorators of the eighties. Tutankhamun death-masks are 'tasteful', even when made of chocolate, because they are indisputably associated with a major cultural event and were obtained from one of the absolute arbiters of taste (The Art Gallery of Ontario).

Bourdieu (1984) makes the following observation concerning the suppression of one's own tastes and the adoption of those of others:

"The denial of lower, coarse, vulgar, renal, servile - in a word, natural - enjoyment which constitutes the sacred sphere of culture, implies an affirmation of the superiority of those who can be satisfied with the sublimated, refined, distinguished pleasures forever closed to the profane. That is why art and culture consumption are

predisposed, consciously and deliberately or not, to fulfill a social function of legitimating social differences." (Intro., p. 2)

Both Trads and Technos may seek out cultural experiences but, following the line of reasoning employed to this point, only Trads have the capacity to enjoy them fully. They, through socialization and appropriate educational experiences, are likely to have acquired the "language of the Curator" (Kelly, 1983) or what Bourdieu (1984) calls the "code." He observes:

"A work of art has meaning and interest only for someone who possesses the cultural competence, the code, into which it is encoded. ...A beholder who lacks the specific code feels lost in a chaos of sights and sounds and rhythms, colours, and lines, without rhyme or reason." (p. 2, Intro.)

Because Trads and Technos, by definition, have differential capacities to enjoy cultural experiences, their behaviours will probably be quite different on those occasions when they both engage in a given activity. The following observations by the author will perhaps dramatize the differences.

- I. On a Sunday afternoon in mid-summer at the Museum of Contemporary Art in Paris (Beaubourg, also called the Pompidou Centre):
 - (A) One must wait several minutes for a table in the extensive restaurant area on the top floor of the complex;
 - (B) There are literally thousands of people milling about in the plaza fronting the museum, on the escalators, and in the foyer areas;
 - (C) One must "insert" one's body into the crowd to enter the museum shop area, view the items for sale between the heads and bodies of others, and wait in long queues to pay for shop items; and yet
 - (D) There was only a handful of people (15 or 20) in the quite extensive gallery housing the principal exhibition in the museum.
- II. (A) After three years of observations: thirty percent of the individuals who paid a substantial fee for a bus ride and admission to the Museum of Anthropology in Vancouver (where I first became aware of this behavioural pattern) enter the lobby area, locate the museum shop, purchase some object representative of the museum or its collection, and then return to their buses without ever entering the galleries.
 - (B) Subsequent investigation indicates that virtually all such persons are first time visitors, most are from out of the country, and most had the museum recommended to them by friends before leaving home.

At Beaubourg and at the Museum of Anthropology (MOA) the Trads might be expected to actually enter the galleries while the Technos would take part in other visitor activities that have meaning for them. The disparities in proportions between gallery visitors and others in the two institutions are likely due to the differences in the general character of the museums: MOA houses what many believe to be the best collection of Northwest Coast Indian art in the world - a very popular art form, while the Beaubourg exhibitions tend towards the contemporary end of the modern-to-contemporary continuum. On the day described above, the paintings on show at Beaubourg were huge, unrelieved grey rectangles, and all very similar in appearance. Also, the Museum of Anthropology is what one might call a traditional museum, even if the building is dramatic and contemporary. Beaubourg, as a museum and as a structure, is anything but traditional. Furthermore,

Beaubourg was designed and is programmed to "democratize" art to attract people who do not ordinarily visit art galleries. And the people do come - more so than to any other museum in France. Jean Baudrillard (1982) maintains that the Beaubourg is actually a monument to the destruction of culture and "its success is no mystery; people go there just for that." Whatever else Beaubourg may be, it is the one museum I know where visitor amenities are given as much attention as the cultural objects on display. And, to the extent that number of persons in attendance is a criterion, Beaubourg has successfully marketed itself.

Factors Motivating Trads and Technos

The discussion to this point should have provided the reader with a basis for delineating the two major cultural experience/object segments concerning which I have speculated (Exhibit 1 summarizes Trad and Techno attributes). It may appear that these segments are essentially incompatible and that may indeed be the case with experiences as skewed towards one segment as Beaubourg. Yet, one suspects two such segments can be accommodated within most cultural institutions if a certain amount of discretion is exercised.

One should observe once again that many persons possess qualities characteristic of both proposed culture segments. Also, most museums, symphony orchestras, dance companies, and the like vary tremendously in their programming. Individuals who fit the Techno description may very well enjoy some programmes presented by their symphony orchestra or local art gallery; Technos clearly respond well to the "block-buster"-type exhibition (e.g., Tutankhamun, Picasso, Renoir) where the symbolic significance is so great that it overcomes an apparent aversion to the cultural content. After all, Picasso is Picasso, even if his paintings and sculpture are "...things my small child might have done."

Trads are, by definition, loyal supporters of cultural institutions.⁴ They should not usually be expected to require incentives to seek cultural experiences (although they may be encouraged to be heavier "users" through marketing efforts). (Robbins and Robbins 1981) Technos appear to constitute the more vulnerable target segment for cultural marketing efforts. It seems especially appropriate to target Technos at present because, as defined, that segment is growing rapidly relative to the Trads (it is the Technological revolution).

This may turn out to be a very bitter pill for some professionals in cultural institutions who even now lament the "commodification of culture" (O'Doherty, 1972), but society is changing and cultural institutions will likely have to change as well.

FIGURE 1

SUMMARY OF TRAD & TECHNO ATTRIBUTES

TECHNOS

(Technologically-oriented)

- (1) Relatively uninterested in objects, exhibitions, performances.
- (2) Experiences embraces elements of institutions not usually thought of as having cultural context.
- (3) Therefore, exhibitions or standard programming are not likely to entice Technos.
- (4) Primarily interested in collecting cultural objects as evidence of having had an experience.

⁴ In a recent study supervised by the author, "obligation to support" was one of two discernible differences between those renewing and not renewing membership. The other difference: renewers were, much more frequently than non-renewers, educated in the arts and humanities. (Hadley 1985)

- (5) Concerned about authenticity, "tastefulness" of objects acquired as markers; do not trust own judgement.
- (6) Seeks contact with other staturesd (trads) through social events associated with cultural institutions.
- (7) Cultural tourism an obligation-based upon making time symbolically useful-results in no more than one visit per institution.
- (8) Newly-statured, through own efforts neither socialized nor educated to understand "curator's language".
- (9) Growing segment.

TRADS

(Traditionally-oriented)

- (1) Have an inherent interest in objects, exhibitions, performances.
- (2) Experience tends to focus on cultural context alone.
- (3) May use exhibitions, standard programming to attract Trads to an experience.
- (4) Not necessarily interested in symbolic values of objects-but in inherent artistic or cultural qualities.
- (5) Likely unconcerned about authenticity; trust own judgement in that respect.
- (6) Do not "use" cultural institutions as a mechanism for interacting with other statured (Trads or Technos)-have informal access to their significant others.
- (7) Cultural tourism a favoured activity-may revisit a favourite institution many times.
- (8) Inherited status-socialized, educated to the "curators' language".
- (9) Declining segment.

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MEDIA, MATERIALISM, AND HUMAN HAPPINESS

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Abstract

This study examined the relationship between media exposure, materialism, and life satisfaction. Attention to advertising was not related to materialism; however, television exposure did correlate with materialism among those consumers who find commercial portrayals of consumers to be realistic. In examining the relationship between materialism and life satisfaction, the correlation between material satisfaction and overall life satisfaction was highest for consumer scoring high on the materialism scale.

Introduction

Consumer values are frequent sources of concern for philosophers and social critics. Schudson (1984, p. 7), in his analysis of advertising and culture, summarizes from the work of a number of critics two descriptions of consumers enmeshed in the "consumer" or material culture. In one case,

participants in consumer culture are seen as philistines; acquisitive and upwardly mobile, with sturdy character, perhaps, but bad values, working long hours and saving money to satisfy obsessive longings for whatever the next prestigious consumer good may be--the stereo, the home computer, the food processor, the videotape recorder.

In the second, more advanced state,

character has degenerated and values have, in a sense, disappeared. There is no longer an obsessive striving after things but a mindless indulgence in them, and the problem is not so much the quest for the stereo or home computer but the assumption that all values inhere in or grow out of these objects.... Narcissism runs wild, the unguilty desire for objects and experiences to "pleasure" oneself runs free.

Implicit in these descriptions of the consumer culture is the idea that goods are a means to happiness; that satisfaction in life is not achieved by religious contemplation or social interaction or a simple life, but by possession and interaction with goods. Such an orientation fits well with Belk's definition of materialism as "the tendency to view worldly possessions as important sources of satisfaction in life" (Belk and Pollay 1985b, p. 394; see also Belk 1984).

Many critics have suggested that advertising increases materialism among consumers (see Pollay 1986). Christopher Lasch (1978), for instance, makes the accusation that advertising influences people to find life's meaning in the products they purchase and that advertising

... manufactures a product of its own: the consumer, perpetually unsatisfied, restless, anxious, and bored. Advertising serves not so much to advertise products as to promote consumption as a way of life (p. 72).

While critics have extensively argued for and against the possible ill effects of advertising on materialism, there is almost no empirical evidence on the subject. In his entire analysis and rather thorough literature review, Schudson does not cite a single empirical study investigating whether exposure to advertising influences consumers to value material goods more than they would otherwise. Further review has revealed only a few studies, all conducted with children, that empirically addresses the issue (Churchill and Moschis 1979; Goldberg and Gorn 1978; Moschis and Churchill 1978; Moschis and Moore 1982).

Thus, while there are plenty of studies of advertising effectiveness--which media are most effective, how much repetition is most effective, whether comparative ads are more effective than noncomparative, and so forth--there has been almost no empirical investigation of the effects of advertising on society.

This paper reviews some of the theoretical bases for some proposed relationships between advertising, material values, and life satisfaction. It also reports the results of an exploratory study of some of these relationships.

Advertising Exposure and Material Values

Advertising critics posit a relationship between advertising exposure and material values. What theories might account for such a relationship? The most directly relevant body of literature concerns media effects on the construction of social reality. The cultivation hypothesis suggests that media to some extent shape or cultivate people's perceptions of social reality. This is especially true when media images are not entirely congruent with the typical environments of viewers or when viewers do not have alternative sources of information on which to base their judgments of social reality (see Hawkins and Pingree 1981 for a review).

Numerous studies of social realism have shown that television presents an unrealistic picture of many aspects of American life. For instance, more crime is shown on television than the average individual can expect to encounter in a lifetime, and older people appear on television disproportionately less than they exist in the population. Studies of heavy viewers of television indicate that these people have a much higher expectation of being crime victims than do light viewers (Gerbner et al. 1980a; see however, Doob and Macdonald 1979); when asked how many older people there are in America, heavy viewers report a lower incidence than light viewers (Gerbner et al. 1980b). While these studies are of television exposure, rather than advertising exposure, the two are highly linked and thus basis for a relationship between advertising exposure and expectations is provided.

In the case at hand, the cultivation hypothesis would suggest that, to the extent that the media in general and advertising in particular show images of materially well-off consumers, those consumers exposed to heavy doses of advertising and other media would overestimate the material well-being of typical consumers (see Belk and Pollay 1985a,b and Friedman 1985 for the depiction of material themes in advertising and media). Further, the frequent pairing of products with happy consumers in television and other advertising may result in an unexamined belief that possessions bring happiness, leading consumers heavily exposed to such advertising to value material possessions more highly than those with less exposure.

There is some evidence that the impact of media images is mediated to some extent by how realistic these images are perceived to be, though this hypothesis has been tested primarily with children subjects (see Hawkins and Pingree 1982 for a review). Summing up research by a number of investigators, McLeod and Reeves (1980, p. 20) state:

Perceiving program content to be realistic is assumed to make television information more socially useful and more likely to be assimilated equitably with information from nontelevision sources. Thus all or most of the impact of television exposure operates through the perception of reality as a conditional variable.

A potential link between materialism and happiness or life satisfaction has not been directly addressed by most critics. However, the tone of their statements implies that they expect materialistic people to be less happy than those with other values (see Pollay 1986; Schudson 1984). For materialistic people, material possessions are frequently characterized as an addictive drug of which consumers need larger and larger doses to maintain happiness.

While theoretical support for a link between material values and happiness is neither strong nor direct, adaptation theory (Brickman and Campbell 1971; Campbell 1980) seems to suggest a negative link between the two. This theory suggests that individuals adapt to a level of satisfaction or comfort. Thus when a desired status or result is obtained, after a time the expectation level of what one's state should be rises, resulting in a gap between state and expectation. This gap between state and expectation is dissatisfaction (French, Rodgers, and Cobb 1974). Thus, those expecting material possessions to bring happiness may in fact experience satisfaction from their goods for a time, but through adaptation processes dissatisfaction will eventually reassert itself. Belk's (1984, 1985) studies of attitudes toward material possessions both found a negative relationship between these attitudes and happiness.

One school of life satisfaction research has investigated the domains of life satisfaction (e.g., Andrews and Inglehart 1979; Andrews and Withey 1976; Campbell 1980). Researchers have measured individuals' satisfaction with various "domains" of their lives such as their marriages, standard of living, health, community, and so forth, as well as overall level of life satisfaction. Using correlation and regression methodologies they have determined which domains contribute most to overall life satisfaction. In this research, material satisfaction, or satisfaction with standard of living, consistently shows a strong correlation with overall satisfaction, although the authors suggest that there are individual differences in how important the various domains are in influencing overall satisfaction. Given the definition of material values provided above, it can be argued that the link between material satisfaction and overall satisfaction would be higher for more materialistic individuals.

Research Objectives

The above discussion leads to the following research questions addressed in this study.

1. What is the relationship between advertising exposure and material values? To what extent is this relationship moderated by perceived realism?
2. What is the relationship between material values and satisfaction with one's material possessions?
3. To what extent do material values mediate the relationship between material satisfaction and overall life satisfaction?

Methodology

Data Collection

Data were collected in a medium-size Sunbelt city using drop-off pick-up procedures to meet quotas of 50% male/female, 50% over age 40, 50% under. Completed questionnaires were obtained from 284 respondents; 252 of the questionnaires were usable (26 cases were eliminated due to missing data on the income variable). Demographic characteristics of the sample are shown in Table 1. While the sample is somewhat upscale, there is good representation across all levels of the demographic characteristics measured.

DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

	n	%
Sex		
Male	124	49.2
Female	128	50.8
Marital Status		
Married	157	62.3
Not Married	95	37.7
Education		
Some high school or high school grad	53	21.0
Some college	67	26.6
College graduate	67	26.6
Graduate work	65	25.8
Age		
18-25	42	16.7
26-35	68	27.0
36-45	55	21.8
46-55	45	17.9
56-65	20	7.9
66 or older	22	8.7
Income		
Less than \$10,000	19	7.5
\$10,000 - \$19,999	39	15.5
\$20,000 - \$29,999	51	20.2
\$30,000 - \$39,999	39	15.5
\$40,000 - \$49,999	32	12.7
\$50,000 - \$59,999	26	10.3
\$60,000 - \$79,999	22	8.7
\$80,000 and over	24	9.5

Measures

Material values. While Russell Belk's (1985, 1985) measures of traits related to materialism (possessiveness, nongenerosity, envy) have undergone psychometric evaluation, they do not directly measure material values as defined above. For this reason, seven Likert-format items were generated for purposes of the study and are shown in Table 2. Initial principal components analysis with oblique rotation revealed that the items did not reflect a unidimensional construct, as three factors emerged using either a scree test of "eigenvalues greater than one" criterion. Because the third factor had high loadings for only one variable (Item 7), the analysis was again performed with this item removed. Results are shown in Table 2. The first factor reflects the extent to which respondents believe more material possessions would increase their personal happiness, while factor 2 reflects a general belief that money can bring happiness. These two factors capture 60.5% of the variance among the items; correlation between the two factors is .32. All subsequent analyses employ summed scores, with personal material values consisting of items 1 through 4 (alpha=.73) and general material values of items 5 and 6 (alpha=.61).

Perceived Realism of Advertising. To measure how realistic respondents perceive television advertising to be, realism was assessed for ads featuring four product categories: fast food restaurants, automobiles (manufacturer commercials), beer, and cosmetics/perfume. Respondents were asked to recall a specific commercial they had seen for each product category and to indicate how similar the people portrayed in them are to people in real life using seven-point scales ranging from "much more _____ than people in real life" to "much less _____ than people in real life." Similarity was measured across the dimensions of attractiveness, happiness, and wealth.

Table 2

PRINCIPAL COMPONENTS ANALYSIS OF MATERIALISM
ITEMS (STRUCTURE MATRIX)

Item	1	2
1. It is important to me to have really nice things.	.69	.23
2. I would like to be rich enough to buy anything I want.	.69	.28
3. I'd be happier if I could afford to buy more things.	.74	.33
4. It sometimes bothers me quite a bit that I can't afford to buy all the things I would like.	.83	.09
5. People place too much emphasis on material things. (R)	.19	.81
6. It's really true that money can buy happiness.	.35	.77
7. The things I own give me a great deal of pleasure.		(excluded)

The midpoint of the scale (4) represents the case where commercial characters are seen as realistic portrayals. The absolute value of the difference between the category marked and the scale midpoint was used as the realism measure. Hence, a low value on the realism measure would indicate high perceived realism (low perceived discrepancy between advertising portrayals and real people). Because of the large amount of missing data on the cosmetics commercial variables (largely among male respondents), these variables were eliminated from subsequent analyses. The remaining items were summed to create a perceived realism scale ($\alpha=.82$).

Media Exposure was measured with two items. The first asks how many hours per week the respondent watches television. Because this variable was severely skewed, a logarithmic transformation was applied. The second item was a 7-point scale that asked how often respondents pay attention to television commercials. Response categories ranged from nearly never (1) to almost always (7).

Satisfaction. Respondents rated their feelings about three life domains, including "income or standard of living" and overall life satisfaction using the "delighted ... terrible" scale described by Andrews and Withey (1976).

Analysis and Results

Advertising Exposure and Material Values

The relationship between advertising exposure and material values was examined with two multiple regression analyses in which the two material values scales functioned as dependent variables and the two media exposure variables the predictors. The correlations between the exposure variables and general material values were not significant. For personal material values, only the beta for television exposure was significant ($\beta=.17$, $p<.01$). The relationship is very weak, however, and the exposure variable accounts for only about 4 percent of the variance in personal material values. Furthermore, an examination of the residuals when the logarithmic transformation of the television exposure variable was used versus residuals using the untransformed measure suggests that the relationship is nonlinear. As amount of television viewing increases, an increasingly large rise in viewing is needed to result in a change in level of materialism.

The Mediating Role of Perceived Realism

Because communication researchers have found that the impact of media on attitudes is influenced by how realis-

tic media content is perceived to be, analyses using the framework described by Sharma et al. (1981) were carried out to determine if perceived realism moderates this relationship. Moderated regression analysis showed a significant relationship between realism and general materialism variables but no interaction; perceived realism correlates with general materialism regardless of level of advertising of television exposure.

For personal materialism, however, realism serves as a pure moderator in that it has no zero order relationship with materialism, but the prediction of materialism is significantly improved when interaction terms (realism X exposure) are placed in the equation ($p<.05$). This suggests that the form of the relationship between exposure and general materialism varies across levels of perceived realism. These differences were examined using subgroup analysis.

The median of the realism variable was used to split the sample into two groups. Regression analyses assessing the relationship between media exposure and materialism were performed separately for the high and low realism subgroups. Results are reported in Table 3. They suggest that realism is a precondition for a relationship between exposure and materialism to occur. When commercials are perceived to be atypical representations of real consumers, there is no relationship between exposure and personal materialism. When character portrayals in advertising are perceived to be accurate, however, a significant relationship between exposure and personal materialism does occur. Realism does not, however, serve as a moderator for the general materialism variable.

Material Values and Material Satisfaction

The second research question concerning the relationship between materialism and material satisfaction was tested using hierarchical multiple regression. Because level of income has been shown to correlate highly with material satisfaction, partial correlations controlling for income were calculated. The squared partial correlation for the set of independent variables (general materialism and personal materialism) was significant ($R^2_{y.a.b}=.08$, $p<.01$).

Table 3

BETA WEIGHTS FOR MATERIALISM AND MEDIA EXPOSURE
WITH CONTROLS FOR REALISM

Independent Variable	Materialism	
	General	Personal
<u>Whole Sample (n=252)</u>		
Attention to advertising	.03	.09
Television exposure	.11	.17 ^a
Perceived realism	-.26 ^a	-.02

<u>Low Realism Subgroup (n=129)</u>		
Attention to advertising	-.02	.15
Television exposure	.04	.08

<u>High Realism Subgroup (n=123)</u>		
Attention to advertising	.06	.01
Television exposure	.19 ^b	.29 ^a

^a $p<.01$
^b $p<.05$

The relationship between general material values and material satisfaction is not significant ($\beta = .09, p > .10$); that for personal material values was more substantial ($\beta = -.31, p < .01$), even after effects of income are controlled for. These analyses indicate that more materialistic people (as measured by the personal materialism scale) are more dissatisfied with their standard of living than less materialistic people.

Life Satisfaction

Numerous studies have shown that material satisfaction or satisfaction with one's standard of living is an important correlate of overall life satisfaction. Further, it has been suggested that the strength of this relationship may vary across subgroups, although the composition of these subgroups has not been specified. The following analyses assess whether material values mediate this relationship; namely, whether the correlation between material satisfaction and overall satisfaction is higher for materialistic individuals than for less materialistic ones.

The sample was split at the median of the personal materialism scale and the correlation between material satisfaction and overall satisfaction calculated for each half. As in the previous analysis, hierarchical regression was used to first control for the effects of income. Squared partial correlations were .13 and .27 for the low and high materialism groups, respectively ($p < .01$). Thus it appears that the extent to which one believes material possessions bring personal happiness correlates with overall life satisfaction, and this relationship is moderated by the extent to which overall happiness depends on material happiness.

The same set of analyses was performed after reforming the sample based on splits of the general material values scale. No difference in the strength of relationship was observed between the three subgroups. Thus, while personal materialism mediates the relationship between material satisfaction and life satisfaction, general material values do not serve the same function.

Discussion

This very exploratory study makes some suggestions about the relationships between media exposure, materialism, and human happiness. With respect to materialism, the measure used here yielded two dimensions that have not been previously addressed in the literature: personal materialism and general materialism. Of the two dimensions, the personal materialism dimension seems the richer construct in terms of relationships. This variable correlated with media exposure and material satisfaction, and it mediated the relationship between material satisfaction and life satisfaction. On the other hand, only one studied relationship was significant for the general materialism measure: respondents who believed advertising to realistically portray typical consumers had higher scores on the general materialism measure.

There are a couple of possible explanations for the poverty of the general materialism construct. First, the measure of this construct was somewhat unsatisfactory. The measure consisted of only two items that were moderately correlated. Rather than dismissing this construct, then, future research needs to improve the measure to accurately determine the construct's role in the material scheme of things. Alternatively, the general materialism construct may be less useful because it is a more abstract, less personal concept. Personal values rather than general social values may be more relevant in influencing individual behavior. Further, the general nature of the questions asked may also make them more subject to social desirability biases or unthinking endorsement of social maxims, attenuating observed correlations.

This study examined the relationship between media exposure and materialism. The correlations between attention to commercials and materialism were not significant. Those between hours watching television and materialism

were significant only for those who perceived television commercials to be realistic portrayals of consumers. This is a provocative finding, and more research needs to be done in this area. For instance, it would be useful to know if the operative construct is perceived realism of commercials or a more general construct of perceived realism of all media representations. This could be examined by studying perceived realism of program content, advertising other than television commercials, and even perceived realism of such media as popular literature. It would also be useful to know what factors influence perceived realism and what demographic subgroups are most likely to perceive media representations as accurate.

Future research also needs to improve the perceived realism measures. The recall measures used here suffer from many forms of bias and selectivity. A better approach would be to actually expose subjects to commercials or television programs and assess how realistic these specific stimuli are perceived to be.

Previous research (Belk 1984, 1985) found a significant relationship between material values and happiness. This study provides some idea of how this relationship operates. Materialism may influence how satisfied a consumer is with his or her standard of living, and further, the extent to which satisfaction with one's standard of living affects overall feelings of life satisfaction.

The study reported here is strictly correlational. Despite the relevance of causal questions concerning the impact of advertising and other media on material values and life satisfaction, answers to causal questions remain elusive given the methodology available in the social sciences. Given the inadequacy of experimental methods for assessing anything but very short term media effects (Pollay 1986), future studies must address these questions with well-formulated and carefully controlled correlational studies.

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THE ROLE OF THE ODYSSEY
IN CONSUMER BEHAVIOR AND IN CONSUMER RESEARCH

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In Homer's *Odyssey*, Odysseus (or Ulysses to the Romans) experienced 10 years of obstacles, challenge, and adventure on his way home to Ithica following the Trojan war. The journey involved extraordinary experiences with giants, Hades, Sirens, gods, monsters, and strange peoples--the stuff of folktales and all quite outside of everyday Greek experience. While the goals of the Consumer Behavior Odyssey during the summer of 1986 were less ambitious, there was a similar hope of experiencing consumer behavior in forms, places, and perspectives that differed from those of our day-to-day lives. It seems particularly appropriate that the participants chose an epic journey as the vehicle within which such experience was sought. For the journey has traditionally been, both in experience and in metaphor, the way in which knowledge is acquired. This paper will explore the characteristics of the journey that make it a primary means of learning about self, the world, and other people. From this historical and metaphorical base, these characteristics will be examined in the Consumer Behavior Odyssey and in the journeys of those consumers we encountered who were conducting odysseys of their own.

The Journey As A Search For Knowledge

Knowledge can be of various types including mystical, personal, and scientific. The journey has long been associated with the search for mystical knowledge in such journeys as religious pilgrimages (Turner and Turner 1978), the Crusades, and the journeys of various religious prophets. It has been suggested that this same seeking of mystical knowledge is also present in modern pilgrimages to Disneyland and Disney World (Moore 1980, King 1981). The search for self knowledge via a journey also has a long history, and has had recent expressions in such American works as *On the Road* (Kerouac 1957), *Travels with Charlie* (Steinbeck 1962), *Zen and the Art of Motorcycle Maintenance* (Pirsig 1974), and *Blue Highways* (Heat Moon 1982). And the journey as a search for scientific knowledge is illustrated by Darwin's voyages on the *Beagle* (Darwin 1860/1962), Niebuhr's expedition to the Middle East (Defert 1982), and the Apollo Moon missions. The acquisition of each type of knowledge is not a mutually exclusive pursuit. For instance, one may learn about self and the world simultaneously, as on the Grand Tour undertaken by Eighteenth Century European Aristocrats (Plumb 1968). But all such knowledge-seeking implies that there is a real association between the journey and knowledge that predates any metaphorical association.

As Jager (1975) demonstrates, there is also an ancient Greek tradition of the journey as a way to scholarly knowledge. He notes that in Plato's time *theoroi*, from which our word theory derives, could mean both a religious journey and "a voyage of enquiry by land and by sea" (Jager 1975, p. 238). Observation and seeing were taken as the starting point for knowledge. The ancient Greek thinker was removed from the everyday working world and allowed to undertake a journey to strange places in order to return home with new insights and wisdom that could be passed on to others. There are several key elements in such a quest:

1. The journey is set apart from the ordinary and is outside of daily life; it is in this sense is sacred. The theorist turns away from the familiar and seeks "that which is emergent, unpredictable, enchanting and awe inspiring" (Jager 1975, p. 239).

2. The journey is austere. Comforts are left behind in order to travel lightly and unencumbered, but also in order to free oneself from the familiar and comfortable

existence in which questioning is unnecessary and meanings are never probed beyond current knowledge. In this the traveler/thinker becomes different from others.

3. The ancient ideal for the journey is self-sufficiency. This requires being resourceful, confident, and persevering. The successfully self-sufficient traveler/thinker gains freedom from both dependency and stagnation.

4. "The traveler shows affection for his reliable companions, his horse or his car, his compass and his weapon". Nevertheless, "the glances of the travelers are directed outward towards the task at hand, not inward or toward each other" (Jager 1975, p. 256). In other words, these few tools and comforts must be seen as means rather than ends.

5. The traveler/thinker leaves the cyclical time of the dwelling (with its repetitive seasons, encounters, and tasks) and accepts the linear time of the journey (with its narrow path, singular occurrences, unique and unrepeatable events, and strange people and places that will perhaps never be seen again).

6. At the same time, the journey begins and ends with the community. Departure is necessary to learn, and return is necessary in order to teach. "At this stage of the journey [the return] the theorist places himself between the fullness of the events and the vivifying presence of an eager audience" (Jager 1975, p. 259).

Participants in this summer's Odyssey can attest to the presence of all of these elements of the journey. We were set apart from the ordinary in turning away from our familiar summer routines in favor of an ignoble motor home and the strange and wonderful encounters of the road. We talked to street people, egg farmers, and those touring mansions of nineteenth century robber barons. We spent nights in a homeless shelter, a hospital, and numerous RV parks. We visited a gambling mecca, a small middle American town's Fourth of July celebration, and an Eastern town devastated by a flood. We toured an elephant museum, a chocolate museum, and a museum of pioneer life on the Great Plains. The closest we came to familiar scenes were a day in an Hispanic supermarket and a day in a fast seafood restaurant franchise.

The austerity of the journey was evident in our tendencies to skip meals, attempt-20 hour working days, absent ourselves from family and friends, abstain from sex for long periods, and purchase only food stuffs and research materials from the vast array of consumer goods we encountered. It was not that we are by nature ascetic or that we didn't miss these comforts, but rather that the work was so riveting and demanding. At the same time, our desire to be self sufficient was manifest in traveling with an RV that was office, kitchen, bathroom, bedroom, and transportation all in one. It was also used as a place to autodriven informants, type field notes, and view daily videotapes.

This reliance on our tools and each other did produce strong feelings of affection and attachment. Antithetical as an RV was to our lifestyles, it became an essential friend which was personalized with various artifacts from the trip. When invited to instead stay in a host's home, we usually opted for the RV. A week's stay in a Hilton hotel was a great annoyance. The occasional RV dinners we fixed for our hosts were a source of quiet pride. Our computers and microcassette tape recorders were constant and trusted companions that we were loath to be without.

And certainly we grew closer to each other, despite inevitable conflicts that occasionally occurred regarding scarce resources like laptop computers, time, bathing water, and cameras. In all of this our external focus on the research tasks at hand was the cement that bound us.

The linear time and path of our journey was guided by an overall time commitment (June 13 to August 25) and fixed points of departure (Los Angeles) and arrival (Boston). While we stayed as much as two weeks in a few destinations, we seldom spent more than two days at any research site; one was the norm. And, although some of us plan follow-up research with our informants, we anticipated that we would never come this way again in our research travels. There was such variety that we could never find ourselves bored or viewing a mere repetition where we could fully anticipate what would come next. But we were broadly cyclical in returning to the home base of the ACR meeting where our primary joint planning took place last year. And we are presenting these initial reports to an audience that will surely be vivifying and invigorating.

In all these respects, we can identify with the Greek ideal of the journey as a learning experience. We share the Western bias that seeing is believing, but recognize that knowledge requires further abstraction. Such abstraction and analysis began during the journey, but are continuing in the effort to develop grounded theory (Glaser and Strauss 1967). That which we present here is necessarily more abstract than the actual experience. But higher level abstraction, theorizing, analysis, testing, and reporting remain to be finished, if there can ever be closure on so large a project.

The Journey As A Metaphor For Knowledge Generation

It is so common to think of the journey and its components and outcomes as a way to knowledge, that our learning metaphors also commonly invoke this theme. At one level, the journey (both generically and specifically), can be seen as a search for self. It is probably no coincidence that the modal participant in the Odyssey was a 40-year-old male. This is thought to be the age period for a "mid-life crisis" (Sheehy 1976, Levinson 1978), and striking out in a new direction is thought to be a common self-seeking event for such men. These sources speak of pathways, passages, getting off to a running start, solo flight, shifting gears, toboggan sliding, becoming lost, coming to a crossroads, seeing the light at the end of the tunnel, the life course, barriers, road maps, transients, runaway wives, exploration, discovery, and finding self. A major goal according to such treatments is to learn about and accept oneself; to acquire knowledge and wisdom.

Religious travel metaphors regarding the attainment of enlightenment are also common. We may be said to seek the truth and the light, find salvation, follow the path of enlightenment, walk in the paths of righteousness, walk through the valley of death, follow a guiding light, keep on the straight and narrow, stumble, lose our way, take one step at a time, backslide, climb the stairway to heaven, fall into hell, or simply wander aimlessly.

Jager (1975) has pointed out that there are also many journey-based metaphors used in the pursuit of scientific knowledge. As scientists we speak of progress, advances, reaching conclusions, keeping up or falling behind, making breakthroughs, moving toward an objective, reaching a plateau, scaling new heights, penetrating the unknown, research streams, discoveries, stumbling onto new ideas, grounded theory, running experiments, running down leads, dead ends, and the leading edge or avant garde of research.

The pervasive use of metaphors involving the journey as a source of knowledge, from ancient religious texts to contemporary scientific reports, suggests that the journey is a compelling and useful metaphor. To be so pervasive it is likely that there is utility in the construct and that this utility probably begins in the fruitfulness of

actual physical journeys as a means of acquiring what we are willing to accept as knowledge. A number of primal societies use some form of travel (usually solo) as a rite of passage that provides adult wisdom. By virtue of encountering new people and places, overcoming obstacles, learning what one can do when challenged, and simply knowing what lies beyond, there is indeed a chance to gain wisdom in such travel rites. The contemporary adolescent's love of driving and solo travel may be seen as a similar self-imposed rite of passage in the quest for knowledge about self and knowledge about the world. The knowledge gained in such journeys supports the view that the metaphor of the journey is an appropriate one.

Yet, the metaphor of the journey as a means of enlightenment is a Western one, even if not entirely so. Drawing into oneself in meditation and withdrawal from the outside world in order to gain knowledge are more common in Eastern religious traditions. What is shared with the journey in such quests for knowledge is the removal of oneself from everyday experience and what is familiar. In fact, we might refer to such meditation and contemplation as an "inner journey". Whether this characterization is borrowing an inappropriate metaphor or not is unimportant. What is more important is that we are unlikely to make breakthrough discoveries in the intellectual or physical comfort of home. A change of environment is an essential ingredient to precipitate new forms of knowledge. And surely to observe the world as it really is should be the basis for any attempt to develop knowledge about it. These were the goals of the Consumer Behavior Odyssey as well as the goals of a number of the informant consumers whom we encountered and who are considered next.

Consumer Odysseys

Non-Odysseys and Mini-odysseys

The counterpart to the journey is home. In order to appreciate epic consumer journeys we also sought to appreciate the home. We encountered a number of consumers in their homes, and in eight cases we attempted a detailed photographic inventory of the possessions within these homes. In two of these cases we also autodrove the informants using photographs or videorecordings as stimuli for them to interpret (Heisley and Levy 1985). We visited the dwellings of the rich, the poor, and numerous strata in between. One of the clearest statements of home as a limiter of knowledge was provided by some relatively home-bound Amish who were only allowed to drive a bicycle or horse and wagon. We learned that they were curious about the outside world even though education was stopped in eighth grade, in part to prevent excessive worldly knowledge. Without electricity and with limited reading material, mass media images of the outside world were also severely constrained. Instead of relying on such traditional means of gaining at least a general knowledge of the world, these Amish often sought to experience it through the tourists and "outsiders" who visited their communities and shopped in their markets. An Amish man who worked at a large flea market ticked off the places from which he had met visitors, as a traveler might tick off the places he had visited. One might speculate that such acquisition of knowledge aids the understanding of what it means to be Amish and aids the mental reconciliation of the great differences in consumption and lifestyles between Amish and non-Amish. Lifestyle contrast was nowhere as evident as in the juxtapositioning of Amish buggies and flea-market RVs in one of the Amish communities we visited. In order that we not appear to contradict Amish values as much, we opted to use bicycles in that particular Amish community.

But as others have suggested, home has no meaning without the risk-taking journey outside the home (Tuan 1971). For some Amish, this reportedly entails getting someone else to drive them on a vacation or even keeping (off their home property) an automobile that others may drive them in.

The recreational vehicle represents a combination or compromise between home and journey. It has been observed that it combines elements of two strong American ideals: freedom and home (Lifton 1970, Neuman 1973, Pierson 1973). Although the public may feel there isn't sufficient binding commitment to property when a vehicle is one's sole home (Cooper 1972, Appleyard 1979, Hayden 1984), when the mobile home is used only for journeys away from another home it is accepted and admired in working class America.

Based on a summer's worth of random encounters with both motor home and non-motorized mobile home owners or renters, there appear to be differences in the use and "hominess" of these two types of mobile homes. Typically the non-motorized mobile home was placed in a fixed location RV park for the summer. In some cases the working member of the household (almost always male) commuted to work while the family stayed and vacationed/summered in the trailer. The three such temporary trailer communities we studied most intensively had strong patterns of neighborhood interaction, shared in the joint activities within the RV park community, and made efforts to externally personalize and beautify their "home". These trailers were clearly thought of as home, and in one park there were extensive and costly improvements made by the trailer owners on the properties that they only rented. Clearly there was a strong sense of home attached to these not too mobile mobile homes.

On the other hand, the motorized mobile home travelers we encountered were much less openly sociable. They would typically retreat into their RVs at night to watch television in isolation from neighbors. Less personalization of these mobile homes occurred, and the owners didn't stay in one place long enough to become friends with "neighbors". They were also those for whom traveling and reaching various destinations appeared to have more appeal than relaxing in one spot until it felt like home. A somewhat greater sense of community developed when such travelers stayed in one spot for some time or, as in the case of some swap meet sellers who traveled this way, repeatedly encountered one another. It was more common however that a family, or more often a retired couple, would use a motorized RV to travel on a vacation with only short stays at each site. Their motor homes were more likely to sport decals of where they had traveled than a name given to their mobile home or designating their family, as was common among owners of immobile vacation trailers. Life among the Winnebago is nomadic and they travel as individual family units. But for the most part their travel is of sufficiently short duration as to only qualify as a "mini-odyssey".

Some Consumer Odysseys

The exceptions in which mobile home travelers were on a full fledged odyssey were notable. As with our Odyssey, they show evidence of the same characteristics typifying the knowledge-seeking journey. Their odysseys also suggest several other hypotheses worth pursuing in a full analysis of the data. Three such traveling groups, employing quite different types of mobile homes will be used as examples. One group we encountered along a "blue highway" roadside in the West will be referred to as the Burtons (a pseudonym). They are a family who formerly owned a suburban home, a pickup truck, and the possessions that a reported \$100,000/year salary provided. Looking at their photos from their former life provided a striking contrast to their present lifestyle. They sold everything and are going to Alaska by covered wagons pulled by draught horses. Their 15-year-old son is being taught by his mother (in her 30s; her husband was in his 40s) and they are anxious to share their food, clothing, and support with anyone who needs it. They were following a leisurely pace and had traveled only a few hundred miles in the nine months since they left their former home. Part of their time was taken in constructing new wagons, including one to pull their "baby"---a draught colt born en route.

The Burtons were seeking something. Part of their "mission" was religious and a test of their faith in God. Part was also a search for self-sufficiency and an attempt to demonstrate to themselves that the world was good. Part was a shifting of energies from alcoholism to a search for a better life. And part was simply openness to what ever the next day would bring them. They had hosted all types of people from Hell's Angels motorcyclists to families traveling in RVs. Besides openness and search, the Burtons suggested a variant on the self-sufficiency theme. As they shod their horses, built new wagons, and adapted to life on the road, rather than making space to accumulate more possessions, they discarded and made do with fewer. What seemed to be occurring is that as they developed more confidence in their own skills to be able to do and provide what was needed, they needed fewer material things as a security blanket. They did document their journey with photographs and several accumulated newspaper stories about them however, and shared their album with us. The other souvenirs they had accumulated were restricted to found objects like cow skulls that were consistent with the pioneer image of their covered wagons and their new personal appearances. Thus they sought to tangibly memorialize their experiences, but in a way that was consistent with their self image. This seems a universal aspect of tourism and appears even more essential in an epic journey (Tuan 1970, 1975; Whetmore and Hibbard 1978, English 1986). They appeared to relish their new life, although the son still missed the bicycle that he had saved his money for and that had to be sold before they left. The one element that is missing from the odyssey pattern in the Burtons' adventure is a community to return to. They have relatives who are left behind that they may return to, but the teaching that they do is more directed to those who stop to see them on their way.

A second consumer odyssey was encountered in the summer-long coast-to-coast bicycle trip of a 20s-aged male named Pat. (again a pseudonym). This was the second summer he had spent doing this, and this time he was accompanied by a female companion. He was not a student, but takes a leave of absence from work in order to test himself against the road, against other bicyclists or even mopeds he may encounter, and against himself. He too sought to tangibilize his trip with photographs, collector plates for his mother, and postcards he sends to others at home or, occasionally, to himself. Like the Burtons, these trips have taught him that he can do great things and that he needs less than he formerly thought. Even though he travels heavily for a bicyclist (55+ pounds of gear and bike), when he returned from last summer's odyssey he began throwing almost all the possessions out of his room. His mother stopped him when he tried to replace his bed with his sleeping bag and the floor. He also feels that he has learned how to get more in touch with his body on his trips. Besides change, austerity, and self sufficiency, his trips result in affection for gear (although as with an old horse, he is willing to retire it when it has served faithfully but worn out) and the adoption of a different type of time. Such familiar routines as getting up, eating, and retiring are no longer at specified regular times, but depend upon the challenges and sights of the day. As with other types of vacations, there is a disruption and suspension of both time and space on such a trip (Grinstein 1955). And there is clearly a learning intent while on his bicycle odysseys and a teaching intent on his return. He takes numerous slides with the express purpose of showing them to school and church groups on his return in order to convince these audiences that they too can follow their dreams and do great things. There is in fact a sort of missionary zeal in his desire to show others the wonders of America by bike. He not only feels that he learns more about himself on these trips, but also that he learns about geography and geology.

A third example of a consumer odyssey encountered this summer is the coast-to-coast and back (plus Canada) trip of a 40-year-old flea market vendor who will be called Guisseppi. Two years ago he sold his restaurant, quit

cooking, and started a full time secondhand merchandise business with a partner and his partner's wife. This summer he bought a 1940s vintage armored truck that has been converted to a mobile home. He is using it to travel with his son (16) and his partners' son (18) on a circuit of flea markets. They have merchandise along in the cramped van, but their stock will be replenished by mail from the partners who will send more of the metal toys, jewelry, and miscellaneous other used merchandise in which they specialize. On this trip, he plans to do it all, including visit various relatives. He is proud of the van they live in and travel in and he basks in the attention that it draws from those that see it. It has a few primitive kitchen tools mounted on the outside and says "Guisseppe's Mercantile Establishment" in house paint on the side. There are also speakers mounted on the outside so that he can do some "barking" to attract attention to his stall at the swap meet. Like the Burton's, Guiseppi's appearance is markedly different than in his former life. His hair is moderately long, his clothing is very casual and somewhat hippyish, and he is well tanned. He also seems a picture of self confidence. His eyes truly seem to sparkle and there is clearly an affection for the boys with whom he clowns. His joy is that his partners' son is going into the business and is learning from him. His sadness is that his own son wants to go to college and have nothing to do with the business. Still he is glad that he can see the country with his son and introduce him to long lost relatives. It is also clear that Guisseppi sees this as a once-in-a-lifetime trip and relishes it dearly. But like the bicyclist Pat, he will eventually return "home". It will be good to return to hot showers and the other comforts of home, but he would not give up the trip for anything.

Conclusion

To have encountered these and other odysseys this summer while on our own Odyssey is more than a matter of selective perception. There seems to be a compelling desire for such a journey in a large segment of the population and many make at least one such odyssey of their own. When we described our odyssey to others its purposes were not always accurately understood, but the essence of such a trip provoked envy and the frequent wishful desire to go along. Nevertheless, the odyssey is one variety of travel experience that has not been recognized in the literature on tourism (e.g., it is missing from typologies in Graburn 1977, Nunez 1977, and Smith 1977). The difference between the odyssey and the ordinary vacation or tour is perhaps one of degree rather than kind. But when the commitment to such a tour is to quit jobs, sell possessions, and set out into the unknown, the magnitude of difference is significant. The commitment to knowledge acquisition is also much greater and may avoid the sort of misinformation typically associated with rapid tourism (Dunbar 1977). And while other tours may pretend to the sort of Durkheimian sacredness typically associated with home, the odysseys are imbued with the deep ritual that more clearly is associated with sacred status (MacCannell 1976, Graburn 1977).

There is much work remaining to be done on the data from our summer Odyssey. More than 500 single-spaced pages of field notes, journals, and logs are now being evaluated with the aid of a computerized qualitative data analysis program. Over 100 videotape recordings, dozens of audio tape recordings, and thousands of photographs must be analyzed. Separate analyses will be completed for various phenomena, research sites, and abstract themes. Some follow-up and member-checking with informants will be done (Lincoln and Guba 1985, Miles and Huberman 1984). And further triangulation, auditing, and cross-site comparison will be accomplished. Until analyses are completed we cannot fully answer what the Odyssey meant and what we learned. Perhaps we will have to answer this question as did Kenneth Patchen when asked about his mystical odyssey narrative, Journal of Albion Moonlight, that "It means a thousand and a thousand things; what did [your] last summer mean?" Perhaps our Odyssey enlightened informants

about the meaning of their own odysseys, just as theirs helped tell us something about our own journey in search of knowledge. If we have committed some heresy in the process (Zaltman and Bonoma 1979), we are delighted. And as for the affection toward traveling companions...this shall endure.

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A POSITIVIST'S REACTIONS TO A NATURALISTIC INQUIRY EXPERIENCE

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Abstract

Positivists often express concern about naturalistic inquiry. These concerns include questions about the rigor of the methodology, accuracy of the information generated, and use of naturalistic inquiry to provide support for theory. This paper is a positivist's reactions to these questions based on limited exposure to the naturalistic method as conducted during the Consumer Behavior Odyssey.

Introduction

Naturalistic Inquiry has been proposed as an alternative ideological and methodological approach to research for the social sciences (Hirschman 1986, Lincoln and Guba 1985). The purpose of this paper is not to argue if positivistic or naturalistic research is more appropriate for the study of consumer behavior. Rather, it is a discussion of the methods used in naturalistic inquiry as viewed by a positivist. Given this orientation, the terminology used in the manuscript will be that of a positivist. This may not accurately reflect the naturalist's perspective on research, but will accurately describe a positivist's perspective of naturalistic inquiry. It should also be noted that this is my reaction to naturalistic inquiry as practiced by the Consumer Behavior Odyssey.

Concerns About Naturalistic Inquiry

As a positivist, I had three major concerns about naturalistic inquiry: naturalistic inquiry is not rigorous, naturalistic inquiry is biased (data do not support conclusions), and that naturalistic inquiry can be used to generate ideas, but is inadequate for theory-testing. As my exposure to naturalistic inquiry increased, I realized these three related concerns were a function of a misunderstanding of the naturalistic position rather than true flaws or problems. Each of the concerns will be addressed below.

When I told peers about my summer activities, the common reaction was, "How did you get the dean to fund your vacation?" Somehow, conducting a naturalistic study was not viewed as rigorous. The lack of rigor seems to be a concern about the way information is collected. In positivistic research there are clear systematic guidelines to collecting data. Constructs and the relationship among the constructs are hypothesized. Measures of the constructs are developed and tested. The measures are administered to an appropriate sample of subjects in a way that reduces potential bias. Finally, well defined methods of analysis are applied to determine if the hypotheses are supported. Although naturalistic inquiry does not fit into this system of research, it does not mean it isn't rigorous or

systematic; it's just different. Lincoln and Guba (1985) and Hirschman (1986) present the systematic approach used by naturalistic inquiry so it will not be repeated here. However, a careful examination of the naturalistic approach will show that there are systematic rules for the conduct of research.

The rigor of naturalistic inquiry was made salient to me after trying to document interviews I had conducted. It should first be recognized that interviews often ran one to two hours. Recording all the information is almost an impossible task. My reaction to the information overload was to simply record the "relevant" information. But this is not systematic documentation of the data. The determination of "relevance" is inappropriate at the time data is collected. Instead, relevance is determined in the analysis stage. Therefore, when documenting an interview, the researcher must record the conversation as close to verbatim as possible (It's surprising how much could be remembered once the researcher attempts verbatim recall). The rigor in the data collection is in the verbatim recording of an interview rather than the careful administration and coding of a questionnaire. It's not that naturalistic inquiry is not systematic, its just that the systematic nature of the research is different.

Related to the issue of rigor is the concern about bias. I felt that naturalistic research would be inherently more biased than positivistic research. Positivist attempt to control bias by carefully wording questions, using double blind research techniques, and using quantitative techniques to summarize the information contained in the data. Naturalists make the accurate observation that bias in research can not be completely controlled and surfaces in many ways in positivistic research. Their reaction is to claim that bias can never be controlled and therefore doesn't need to be addressed. However, I found this does not mean that naturalistic research is not concerned about the data accurately describing the research experience.

Naturalist use numerous techniques used to control the accuracy of the data. First, all descriptions are put in "objective" or verifiable terms. Vague or ambiguous terms are avoided. For example, I once wrote that one respondent's house "contained alot of antique furniture." This is a good example of "biased" or "inaccurate" data. "Alot" has numerous interpretations. It would have been better form to say, "all (or half, etc.) of the furniture was antique", or "I didn't see any furniture that wasn't an antique". A second approach was to separate opinion and "fact". As noted above, when recording data, the researcher attempts to record things as they are. There is an attempt to interpret observations as little as possible. Any interpretation that does take place is recorded in a separate location so the reader (auditor) doesn't confuse opinion with "fact".

¹ This discussion is based on the personal experience of the first author.

There are several techniques used to verify "facts" after they have been recorded. These

would include triangulation of various sources of data (others field notes, video or audio tapes, artifacts, etc.) as well as verification by the informants. A good example of this occurred after we had interviewed a man concerning antiques. He expressed a rather unique perspective. To him, the value of antiques lie in the fact that they were hand made. A question arose about the value of the age of the antique. Two researchers had come to different interpretations about the man's view of the importance of age. Reinspection of the field notes indicated that the man had made the statement that, "new pieces of furniture that are completely hand made should have the same value as antique furniture." By examining other "facts", a more accurate interpretation of the data was made.

I began the Odyssey comfortable with the use of naturalistic inquiry to generate ideas, but I was less certain it could be used to support (validate) theory. In retrospect, I guess I defined "support" of theory too narrowly. The real concern when discussing support for a theory is whether the data are consistent with the theory. Support for theory has generally meant statistical support. For example, in causal modelling, the chi square statistic indicates the data fits a proposed theory (which it rarely does so we simply adapt our theory; Darden 1979). But theoretical support can also be non-statistical. Naturalist's support their position by showing a concept applies across a wide variety of settings, and that seemingly unrelated behavior reflect components of the concept. In other words, the concept surfaces repeatedly, or that a theory can explain behavior in all known expressions of that behavior. As with the positivist, a naturalist wants to make sure the data are consistent with the theory. This consistency is evaluated using auditor checks rather than statistical techniques. Therefore, naturalistic techniques can be used to support a theory by showing the data are consistent with the theory.

Unanswered Questions

While it can be argued that naturalistic inquiry is an acceptable style of research, this does not mean it isn't without potential problem areas. Both positivistic and naturalistic research have minor methodological problems that researchers constantly attempt to correct or control. While I have been convinced that naturalistic inquiry has validity, there are four unanswered questions that still plague me, the concept of transference or how to make research useful (generalizability), how past knowledge is used, ethical questions, and the political problems of implementing naturalistic research.

The goal of scientific study is to produce a useable body of knowledge. In other words, a study must be relevant. To positivists this means a study should be generalizable. However, naturalists claim that generalizability is unattainable since there are no universal laws. They prefer to talk about transferability. This is fine, since it is an alternative way of saying useability or relevance. However, naturalist seem to argue that the demonstration of transference is not the task of the researcher.

Hence, the only way the transferability of a particular interpretation can be assessed is by comparing it with

interpretations constructed in other context. The transferability of an interpretation to a second setting is thus knowable only on a post hoc basis; it can not be assessed prior to the construction of the comparative interpretation (Hirschman 1986, p. 245).

Certainly naturalists wouldn't claim that the results of their studies only apply to the isolated incident they examined. However, they need to provide a clear statement about the known or perceived boundries of transferability as determined by the researcher. Transference shouldn't be left strictly up to the reader of the research. If the reader can not determine if previous research would be useful in a different setting, then the value of that research is greatly reduced since the user must reconduct the study before applying the theory. In addition, the researcher is in the best position to identify the characteristics that must exist (or many need to exist) for the study to be transferable. It should be remembered that an important criteria for good research is relevance. It may be that transferability can only be determined on a post hoc basis, but there should be some expected transferability before research can be deemed potentially useful (worth publishing).

A second problem faced by naturalistic inquiry is the use of past knowledge. Positivists rely on previous work to form hypotheses and identify important issues. There is an attempt to build upon knowledge, but naturalists approach research without preconceptions of any kind. Given the inability to identify transferability a priori, there is the constant possibility of reinventing the wheel. It is not clear that a coherent body of knowledge is generated or how how a body of "idiographic knowledge" is used for developing future research.

Hirschman (1986) notes some of the difficult ethical questions that naturalistic inquiry raises. These questions are more important than may first be imagined. Two examples may highlight the problem.

One of the goals of naturalistic inquiry is documentation of conversations. The Consumer Behavior Odyssey determined that tape recording conversations without prior knowledge would be unethical. Instead, just after an interview we attempted to produce a verbatim transcript of the conversation. But does it really matter if the recording mechanism is human or machine. Would a person with a photographic memory who could record a conversation from recall, without error, be more ethical than a tape recording of a conversation. The ethical question is not how conversations are documented, but whether they should be documented at all without permission.

A second concern is when an interview causes discomfort to the interviewer. If certain sensitive topics (recent loss of possessions or loved ones) could cause discomfort to the informant, then should they be discussed. A researcher can rationalize that such discussions can be cathartic, but it isn't clear the discomfort is cathartic.

No easy answer to these questions exists. Anthropology and other disciplines that use naturalistic inquiry may provide some answers. But it is my guess that research will continue until a major problem becomes apparent much like Milgram's electric shock studies raised the ethical questions in experimental research.

Ideologically, the humanistic method may have great value, but discussions of the methodology often ignore political realities. Politics presents an especially thorny problem when establishing the auditor role and evaluations for tenure and promotion. While most people do research because they enjoy it, there is still the need to have research efforts recognized and rewarded. Naturalistic inquiry raises two concerns about the reward of research. First is the role of the auditor. The auditor plays an important role in the evaluation of naturalistic research. The time and effort required to do the task well is monumental. Therefore, an auditor should be well rewarded. However, this gives the auditor a vested interest in getting the research published. Therefore, if auditors are rewarded for their contribution, there would be a conflict of interest. It may be suggested that "blind" auditors could be used much like current reviewers. However, the amount of time required to conduct an audit makes this difficult to implement and it is contrary to the auditing process as specified by naturalists.

A second problem is the type and amount of research generated by naturalistic inquiry. It seems reasonable to say that naturalistic research would be better conveyed through the publication of books rather than journal articles. In addition, it takes more time to conduct naturalistic inquiry. Therefore, the volume and type of research generated will be different than that generated by positivists. The difficulty will be to have peers, deans, and others be willing to evaluate naturalistic researchers differently than positivists.

Conclusion

The key question in evaluating the positivistic and naturalistic approaches to science is whether either approach can provide insights about truth. The answer is they both can. Therefore, the selection of the appropriate style of scientific research should be left to the researcher. In a footnote, Hirschman (1986) argues that, researchers will always doubt the truths found by studies using alternative methodologies.

"It is unlikely that a humanistic scientist could or would place faith in the results he or she obtained from a classic double-blind experiment. Similarly, it is difficult to envision a positivistic scientist believing that the knowledge gained from a direct, personal conversation with a consumer could reveal general truths about the nature of reality. Each scientist has placed his or her faith in a given way of knowing and, though one might practice (or feign to practice) an alternative way of knowing, it is doubtful that he or she would really believe, in the answers it provides (Hirschman 1986, p. 239).

I would urge the positivistic researchers not to be so narrow minded. Consumer researchers seem willing to accept naturalistic inquiry when applied in disciplines like anthropology. Why then does the methodology suddenly become unacceptable when applied to consumer research? Properly conducted naturalistic inquiry can provide very useful information about consumer behavior and can provide test of and support for theories. While positivists may want to provide an alternative positivist test of a theory, naturalistic results should be equally valued.

As noted by Hirschman (1986) they provide a "parallel path" to knowledge.

If positivists are truly going to accept naturalistic inquiry, they should not attempt to force naturalists into positivists' ways of thinking by evaluating naturalistic inquiry using positivist criteria. If naturalists find that using "personally familiar" reviewers (as opposed to blind "objective" reviewers) does not affect the conclusions reached by a study, then positivist shouldn't demand "objective" reviews. Positivists can't take a mightier than thou attitude and assume they have the only path to truth, or the only criteria for evaluating truthfulness. Both groups are interested in the discovery of truth and will adapt their methodologies with this in mind. Positivists certainly shouldn't simply accept every humanistic study without question. Rather, humanistic methodology and the quality of a specific study should be evaluated with a humanistic perspective.

Not only should positivists accept naturalistic inquiry, they may find it is a more appropriate style of research in some settings. International consumer research provides a good example. The use of survey or experimental research are extremely difficult to implement in international settings. Often the researcher's perspective is so different from that of the respondents, that prespecified hypotheses are impossible to formulate. As a result, much of international consumer behavior has been descriptive. The humanistic orientation may help overcome the "descriptive" stigma that has characterized international research.

Finally, if positivists are going to accept naturalistic inquiry, there must be some way to combine the output of the two styles of research. To do this, the exact output of each style of research must be determined. It appears that both styles of research are interested in developing and testing theory. Positivists can use naturalistic research in basically the same way their own research is used. If a theory is proposed based on some study, the researcher would evaluate the usefulness of that theory and possibly conduct replications to provide added support for the theory (or further define the conditions under which the theory is useful (transferable)). More importantly, a researcher could identify how theory should be adapted based on the results of a naturalistic study. In other words, naturalistic theory and support for theory can be used much like we currently use positivist theory and support for theory.

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FROM THE LOG OF A CONSUMER RESEARCHER:
REFLECTIONS ON THE ODYSSEY

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Abstract

This paper contains several excerpts taken from the log that its author kept just before, during, and for some time after his participation in the Consumer Behavior Odyssey. These selections focus on a central theme -- namely, how and why the author chose to preserve the record of his experiences in a single logbook rather than in separate field notes and journal entries (the accepted anthropological practice followed by other members of the group). A preface traces the log's genesis back to early childhood memories and offers a rationale based on the author's current research interests. Several dated log entries continue the latter theme in more detail. A post-script concludes with ten reflections on the meaning of the Odyssey experience.

Preface

When I was a boy, I used to travel every summer with my family to stay at our place on the Brule River in Northern Wisconsin. The river was spring-fed, icy-cold, and brim-full of small brook, brown, and rainbow trout. We spent our days fishing with fly rods, poling canoes upstream, floating back down, and on occasions of extreme bravery, swimming in the clear, frigid water. In the evenings, we read, sang campfire songs, and played cribbage.

Everything in this tranquil place had its own special name. To the constant consternation of novice guests, a boat was a "canoe"; its front and back and sides were its "bow" and "stern" and "gunwale"; its oar was a "paddle." I quickly mastered these terminological intricacies. More difficult for a small boy to remember, our house was "the lodge" and its central living space was "the council room."

Tucked into the top drawer of a large desk near the window of this council room, my family kept a book called "The Log." Every day or so, my dad or grandfather would take pen in hand and, in a meticulous version of his best physician's scrawl, would enter a record in this logbook. Such entries contained the names of all guests and visitors, the number and sizes of trout caught on the river that day, the magnitudes and durations of significant storms, the dates and times of canoe-poling feats or first accomplishments, and any other informational tidbits that my dad or grandfather chose to immortalize in this fashion. Sometimes lists of numbers would appear in the log, sometimes passages of well-crafted prose.

One year, when I was about ten, something extraordinary appeared under our Christmas tree. It was a book written by my grandfather, based on the accounts entered into the log over a lifetime of trips to the Brule River and published at his own expense, complete with photographs. Everyone who has ever read this book has loved it. It contains wonderful evocations of life on the river. It beautifully conveys my grandfather's sense of humor and magically captures his spirit of playfulness. It plumbs the depths of his soul by recreating his most cherished moments on the Brule. It is called From the Log of a Trout Fisherman.

I suppose that, ever since I initially encountered my grandfather's marvelous accounts of his experiences on the Brule, I have secretly wanted to write my own log. His introspective, deeply personal narrative provided the first quasi-phenomenological portrayal of a lived world that I had ever read. Since it came from a man who had studied under William James at Harvard, I ought not to have been surprised by its eloquence. But, in those days, I did not know such things. I only knew that it felt good

to read and that, someday, I would like to try something similar.

The only problem was that I lacked a suitable subject. For many years, my life's most dramatic moments consisted of studying for school (which mostly involved reading other people's books), playing the piano (which only David Sudnow has managed to make experientially interesting), and football practice (which I would rather forget). Probably with justification, I found it hard to imagine these as topics in which others would find any interest. Only recently did I discover "consumption" as a heading under which I could meaningfully collect some of my most self-reflective thoughts. I have put together such musings in short pieces entitled "I Awake," "I'm Hip," and "The 25-Cent Tour of a Jazz Collector's Home." But these amount to little more than tiny vignettes, brief stories that some would charitably call introspective or interpretive in the humanistic tradition and others would harshly characterize as egocentric or narcissistic in self-indulgent excess. Having grown up reading people like Samuel Johnson, not to mention my grandfather, I do not shrink from such accusations. Yet, until now, I have lacked a subject broad enough to command my sustained attention. Finally, in the Summer of 1986, I got my chance.

During the Summer of 1986, several consumer researchers banded together and went on an excursion that they called "The Consumer Behavior Odyssey." They rode in a van -- a 27-foot recreational vehicle -- from California to Massachusetts, observing different aspects of consumer behavior in a wide range of settings. During a two-week period in July and August, they and their RV stayed with me at our house in the Pocono Mountains of Pennsylvania. This house is a modest weekend retreat in a developed area called Hemlock Farms. Hemlock is not exactly the Brule River, but at least it is in the woods. This log represents my experiences -- just before, during, and for some time after that visit by the members of the Consumer Behavior Odyssey.

I intend my log as a companion piece to the field notes and journals written by my friends and colleagues who participated in the Odyssey by riding on, sleeping in, and often nearly clinging to the van. Like good naturalistic inquirers, they followed accepted anthropological practice by endeavoring to split their observations between the more objective and interpersonally verifiable (as contained in their field notes) and the more subjective and personally introspective (as contained in their journals). But, from the start, I questioned the tenability of this distinction and opted instead for a medium that combined both in what I called a "log," partly to distinguish it from the documents created by my traveling companions and partly to remind myself that I followed in a tradition started by my grandfather.

My log represents my reactions to what I observed around me on the Odyssey. It stems from the data collected in my travels but it reflects the filtering of those data through my own sensibilities. In other words, it tries to capture the research experience as I lived it in the Summer of 1986. Thus, in a sense, one might say that my colleagues have written about the Odyssey across (across the country, across consumption situations, across informants) whereas, by contrast, I have written about the Odyssey within. I have peered as far as I can see into the depths of my own responses to our observations of consumption phenomena. Here is what I have found.

Excerpts from Log Entries

Tuesday, July 29

...As I pass the Pickerel Inn, heading toward the Hemlock Farms entrance, I notice that it is already 11:07 a.m. Writing notes in the car turns out to be a completely absorbing experience, and the time has flown. I have the sudden thought that I might find the van waiting for me at Horseshoe Lane, with several angry friends upset that I wasn't there to meet them. But I calm myself with the thought that it is much more likely they will arrive in the late afternoon or evening or even in the middle of the night. I am expecting Jeff Durgee at 4:00; so we'll see what happens.

At the Hemlock Farms gate, I tell the incredibly officious guard that I expect some visitors at Horseshoe Lane. This uniformed officer makes me spell my name three times and inquires solicitously about the names of all my visiting friends and their exact times of arrival. I hope and pray that the van passes his scrutiny without incident.

When I first heard that the Odyssey would be coming cross-country in a van, I pictured one of those cute little Dodge wagons with the pointed noses. In Chicago, the sight of the actual vehicle that my friends had rented in California filled me with something between astonishment and dread. I am sure that it will be the largest privately owned object on wheels ever to seek access to Hemlock Farms. While I know of no specific rule against inviting your friends to visit you in a van, I still cannot picture this gigantic RV breezing past our gestapo-like sentry without some sort of horrendous hassle. I hope that he has not received gatehouse training in how to shoot to kill.

(Suddenly, I hear what I think might be the Winnebago groaning its way up Gaskin Drive, but the vehicle in question turns out to be the Hemlock garbage truck.)

On arriving at the house, I unpack the car (which could use a wash and maybe a new coat of paint), put away the groceries (such as they are) and my clothes (what I can fit on my half of the closet shelf), open all the windows (to clear the musty smell that has collected in only a day and a half), spray half a can of bee poison into the now-deserted wasp nest that I stumbled on the other day (with painful results), and perform a superficial rat patrol (finding no mouse signs for the first time in recent memory, probably because we have only missed two nights in the house). I get WBG0 going on the FM (with loads of static), retrieve the rest of my coffee from the car (only three hours old and still barely lukewarm), and settle in the gazebo (to write a few more notes to myself and maybe others).

Here, the scene seems terribly tentative, yet peaceful. The contrast with yesterday in the City seems incredible. Yesterday was all craziness and rush as I desperately tried to finish the first draft on a revision for JMR so that I could get it into word-processing and sent to Bill before I left town. I succeeded in placing this document on Mary Ann's desk (in the absence of Liz) only by pushing myself and my loved ones to the limit. By the time I got to bed at 2:15, I had completely drained my physical and emotional energies.

Now I sit in the Sears gazebo, surrounded by our slim white chairs and the rusty hibachi, in a moment of utter tranquility of environment if not of spirit. A grasshopper, probably injured, lurches across the terrace. The sun comes and goes from behind its cloud cover. Distant rolls of thunder seem to underline the heaviness of the humid air. From the house, I can hear a Latin-tinged jazz band (maybe Bill Watrous) performing Chick Corea's "Spain" with some heavy bongo drums and screaming trumpets. Meanwhile, I wait.

I wait for the arrival of my friends and who-knows-what kind of activities to come. I do not even know in advance

which friends and colleagues will still be on the van by the time it gets here. I'm more or less counting on Russ and Melanie, probably Rick, maybe Tom, probably not John, and almost certainly not Hal (who said that he would again join the van at Beth's house after it leaves here). Jeff will arrive separately. Wendy might join us, as might T. J. and who-knows-whom. It should prove quite interesting to see who arrives. During the delay, I have the doubtless soggy Whopper that I bought in Stroudsburg, the need for exercise, and plenty of paperwork to keep me busy....

....After some interesting footage of interviews on the TV monitor, Rick, Joe, Jeff, and I share a few thoughts on our feelings about the direction of the research. I express my own reaction to the field notes and journals completed up to the arrival of the van in Chicago. These hinge on what I sense is a gap between the relatively matter-of-fact field notes and the more interpretive journal entries. According to the perspective of naturalistic inquiry, accuracy, completeness, and consensus regarding the field notes are touchstones of rigor and trustworthiness. This emphasis extends to a preoccupation with research audits and member checks. I acknowledge the potential value of such procedures but fear that an over-emphasis on the mechanics of collecting and recording field notes might lead to a "new orthodoxy" in which we just latch onto a surrogate for the old positivism. For me, increasingly, the emphasis on data collection needs to be tempered by an openness to interpretation -- including interpretation that is subjective, personal, and introspective. The clearest opportunity for such an interpretive thrust lies in the journals, and I therefore favor a greater value placed on the diary-like journal entries and their potential contribution to developing interpretations of what is happening in the research process. I raise this point again at dinner, where it receives some sympathy but prompts general agreement that, at the start, the field notes demand so much investment of time that the blossoming of the journal entries will have to come later....

Wednesday, July 30

...(At breakfast, we also discuss some differences in perspectives on what constitutes fair game for the field notes and particularly the journals. I have had some interest in exploring the group process involved in the research endeavor itself. Apparently, John began some of his early entries in this direction but soon discovered that his explorations were seen as too invasive. Rick joined with similar inclinations but has felt that a real focus on the lives of others might intrude too deeply into their privacy. Since I remain interested in this topic, I shall need to find a way to observe what is going on in the research group without revealing material seen as too sensitive. Perhaps, since I am mostly writing about myself, I can get away with some personal revelations. We'll see.)....

Saturday, August 2

...Our efforts to eat in Milford devolve into a disaster. The diner serves no beer; so we leave. The hour is 10:15 and the Tom Quick Inn has already closed for the night. We walk down to the pizza parlor (still open even at this late hour for Milford). On the way I suggest that we could drive home and eat the elaborate meal that Sally laboriously prepared and brought from New York City, but several of us prefer the convenience of the fare at the Greek-Italian takeout counter. These hungry ones order and eat sandwiches and pasta. Then we drive back to Hemlock where Sally, Joe, Rick, Jeff, and I eat Sally's curry soup, pasta salad, asparagus, hot biscuits, and chocolate cake. We open two bottles of Inglenook Chablis.

Our discussion leans toward philosophical issues bearing on the science of the trip. I reveal some of my concerns that the Odyssey "method" could evolve into a kind of orthodoxy with Naturalistic Inquiry as its bible and Lincoln and Guba as its prophets. I am especially con-

cerned that the few people in our field who genuinely care about qualitative, ethnographic, phenomenological, clinical, narrative, introspective, interpretive, humanistic, and related methods not impose their own particular approaches on each other. The rather feverish emphasis on field notes, journals, the entry thereof on terminals, and its outputting via the printer onto stacks of sheets that are passed around and half read but never discussed might be a comfortable research style for some but not for others. Besides pets and esthetics and leisure experiences and things like that, my main interest at the moment lies in observing and analyzing my reactions to what is happening around me and in studying and reflecting on the research experience. For example, I cherished the opportunity to interview Joe, not so much because of what he said about his big Rhodesian Ridgeback (though I do have interest in his pet consumption) as because of what I learned about the experience of depth interviewing on camera. Similarly, I value the interaction with Russ, Melanie, Jeff, Joe, Rick, et al. not so much because of what they can teach me about consumer research (most of which I could pick up by reading their articles) as because of what these interactions suggest about the group research process. I often sense that the feverish emphasis on watching video tapes, typing at the terminals, printing output, loading/unloading the van, changing batteries, and parking on level ground may detract from the ability of the group to sit down and talk about what is actually happening on this Odyssey. Thus, many potential insights might escape.

In particular, each member of the group has his or her own form of materialism that substitutes having for doing, though some of these go unrecognized. I do not particularly object to materialism. (What collector could?) But I do wonder if we are replacing reflective, mutually reinforcing, and strategic conversation with stacks of photos, artifacts, and computer printouts. My own sense would have been that the printed output could wait until about Christmas and that, meanwhile, we should be focusing on such vague issues as what it all means and such specific exigencies as where we are going tomorrow and when. Today, for example, we wasted at least two hours and will have, at best, three or four productive hours at the Renaissance Fair.

All this may come to a head when the others discover that my journal and field notes are the same thing. Because my primary interest lies at the interface between my observations and how I react to them, I have no straightforward way of keeping the two separate. Moreover, I do not believe in the possibility of truly objective recording. Everything in these interviews comes to us through the filter of our preconceptions and expectations. Further, in our interviewing styles, we structure what happens by asking leading questions and picking up on some aspects rather than others. Even if we make a purportedly objective record via video tape, we still load that record with our own subjectivity by guiding the discussion at every turn and incorporating the cameraperson's point of view. In other words, the observer affects the observed. Heisenberg was right and there's nothing we can do about it. From this, it seems to follow that my field notes (about what people say) merge imperceptibly into journal-like descriptions (of how I react to it). I would rather focus consciously on structuring all my notes in a way that proves meaningful to me than to pretend to remove myself from part of them, especially since the latter gesture is little more than an exercise in futility....

Tuesday, August 5

I arise at 8:00 a.m., shave, brush, and throw myself through a workout to the tones of Hamp Hawes and Oscar Peterson for the second day in a row (same artists, different music). After showering, I fix coffee, pack, and wander around between the house and the van getting things ready for our scheduled 10:00 a.m. departure. These preparations include pouring the Gallo Chablis into smaller carafes that will fit in the van's fridge; rechecking to make sure that I have note-taking materials, cameras, and

film; and giving Russ moral support in his efforts to print my log notes from the disc.

When the van has been packed and loaded with water and wine, we depart in the general direction of Utabsent, PA (near Reading), where we plan to spend some time visiting Martha Park Keeler, an old school chum of Melanie's and a decorator who has offered to let us interview some of her clients, friends, and family.

On the way, I tap furiously at the PC keys, while Jeff drives, and Russ and Melanie read my first three days of log entries. They laugh occasionally; so I conclude that I have at least partially succeeded in keeping the kind of log I seek to create. Meanwhile, most of my trip to Utabsent remains lost in the blur of typing and bouncing and backtracking and retyping....

...Maybe later, I shall punctuate my suburban adventure with a splash in the Keeler's newly installed hot tub.

But "later" never comes. The Odysseys retire to the van to write notes and watch tapes. I join them and am soon sucked back into the maelstrom of consumer research. I feel under tremendous pressure to keep typing up my hand-written log entries -- why, I'm not sure, since Jeff will be leaving tomorrow and, after that, we shall lose our capacity for printing out. I guess I'm afraid of arriving back at Columbia in the Fall with fifty pages of log material to type and no time in which to do it.

The van is much too noisy and crowded to attempt any sort of typing, largely because both Martha and Mark have arrived to watch their friend Buffy and Martha's mother Valerie on TV. I therefore take a PC up to the Keeler's deck, plug in, and start rapping. From this vantage point, I can vicariously participate in the festivities around the hot tub. First, Mark does his daily dousing, with shouts of something between anguish and joy amidst much splashing. On his way back inside, he pauses briefly to tell me his life's story -- namely, that he must live in Utabsent to be near his daughter Margie who lives with his estranged first wife who is a business partner of his second wife Martha (our hostess). He was once offered a better job in Minneapolis at a salary higher than he'll ever make in his lifetime, but he won't leave Margie.

After Mark retires, the Odysseys come out to play in the Jacuzzi. They first call for me to join them, but I explain that I am currently sitting on the deck in a bright light trying to type my log entries on a PC. They then call for brownies, which I shag from the kitchen to give the hungry revelers their next chocolate fix.

I become somewhat disoriented by all this excitement. When I return to the PC, I can barely read the screen. I reach over to fiddle with the contrast button, but accidentally hit the on/off switch, killing everything that I have typed since about the time that Mark left me. Ironically, I could have splashed happily in the hot tub and actually been better off in terms of my typing chores.

I start over.

My friends call for me again, this time to make my bed so that I won't disturb them when I come stumbling into the van. I decline their extra sleeping bag and haul out my sheet, pillow, and blankets. I tuck these neatly in and return to the patio for another hour of typing, a brownie, some milk, and two chocolate-covered ice cream bits that I surreptitiously snatch from the Keeler's refrigerator.

My worst fears about sleeping in the van are more than confirmed. The mattress is pretty comfortable, but the air conditioner blows blasts of icy air directly at my face. I realize that I'll have to spend the night with my head under the covers, wondering why these great van-haunting outdoorspeople cannot survive in this cool climate without artificial air. Predictably, I toss and turn all night....

Thursday, August 7

After our exertions on the excursion to Reading, I crash. I realize increasingly that I have only the slimmest chance of finishing the typing of my logs before leaving tomorrow for my holiday with Sally and Chris. I therefore coax the others without much resistance into spending the day on bookkeeping activities. This goes down fairly easily -- I suspect because Russ and especially Melanie also feel under some pressure to get caught up.

Consequently, after rising, exercising, and showering, I sit down at the round dining table and start typing to the sounds of Andre Previn and Russ Freeman. Six hours later, I am still typing. By this time, from sitting tensely in the slant-backed chair, my lower back is aflame with agonizing pain. I desperately want to reach closure on this task; so I persevere. But afterwards, I feel physically and mentally drained and in no mood to go to the Clyde Beatty Circus in Stroudsburg.

It makes only moderate demands on my rhetoric to persuade Russ and Melanie to designate this as an evening of reflection, conversation, and catching up on the video tapes I haven't seen yet. In fact, they graciously offer to take me to dinner, and I jump at the chance, making a reservation for three at the Settler's Inn for 8:30 (the earliest they can take us). This gives us some time before we need to leave. While I have some beer and peanuts, Russ and Melanie interview me about the house. Russ has taken some photos earlier while I was still typing. He seems to be working on a theme that has to do with symbolic hunting. Evidence in support of this theme includes the artistic animals scattered around the house, the long-bow on the wall, and plentiful supplies of anti-mouse and -ant devices on the bookshelf near the door and in several other all-too-conspicuous corners. I re-explain the household pest problem as best I can. Amazingly, to me, they still think I am over-reacting. Maybe I should have just left that dead mouse in Jeff's bed.

We take the van to the Settler's Inn so that I can watch videotapes on the way. I screen the footage on Buffy Schlinger and Valerie Park, using this opportunity to verify the overall impressions that are already in my log. I would backtrack and make changes only if I found something that was factually incorrect. I don't.

Dinner is most pleasant. We talk about issues like "what does it all mean," "where do we go from here," and "how should we present this stuff at ACR." We find no answers to any of these questions, of course, but we have a nice chat.

During the drive back to Hemlock, I watch more tapes. On our return, I retreat into the house with a PC, the discs, and some hard copies of the notes written by Melanie, Russ, and Rick. I sit up until about 2:00, reading the printouts and scrolling through the discs....

Friday, August 8

I arise at 8:00 and push myself through the familiar exercising and grooming rituals. After coffee and a brief confab with Melanie and Russ, I rush around getting things together to take back to the City for the start of our vacation. Mostly, this involves throwing clean clothes and laundry into two separate garbage bags and hoping I don't get these mixed up with the real garbage, several bags of which have been quietly accumulating for the past few days. I toss all this into the station wagon, exchange some tender thankyou's and farewell's with Russ and Melanie, and leave for home and Sally at about 11:00 a.m.

The trip down Route 402 and several pesky errands in Stroudsburg use up the next hour and a half. The last such errand involves stopping at the Burger King for something that they call "chicken," a Diet Pepsi, and a pee. The "chicken" comes between slices of bread in a sort of sandwich. The pee encounters a line at the men's room; so

I use the ladies' room (which is empty), exit quickly (without detection), and finally reach Route 80 East at about 12:30 (roughly two hours behind schedule).

Postscript

On the trip back to town, I ponder my experiences during the past two weeks. When I drove out to Hemlock Farms, a week ago last Tuesday, I had a deep sense of not knowing what to expect. I was right. The ensuing events that filled my life for the next ten days differed considerably from anything that I might have anticipated.

First, the monster RV hardly raised an eyebrow at the security gate. Apparently, the gate really is intended for security and not to hassle the residents of the "Property," as the real estate agents like to call it. Presumably, thieves do not usually arrive in mammoth six-wheeled recreational vehicles that stick out like sore thumbs; so vans are OK.

Second, I spent much less time being a host in our house than I had originally anticipated. For the first couple of days, I tried to play this role. But, especially after Joe and Rick left, I began to understand that the others really did prefer being in the van; so I spent as much time as I could on wheels.

Third, I learned that the boundaries of my eagerness to live in a van extend from about 9:00 a.m. to about 10:00 p.m. I vastly prefer sleeping in (one of) my own bed(s) and also feel much more comfortable trying to exercise, shower, and change in a house. Contrary to Melanie's interpretations (which were also largely disconfirmed by her friend Martha), I do not feel any status hangups over inhabiting a van. I do not feel that it is lowbrow or de-classé or ecologically unsound. I just find it physically uncomfortable for any more than fifteen or sixteen hours a day.

Fourth, I do not think that this particular Odyssey could have functioned without the van. The RV provided a good place for a group of people to work for about eighteen hours a day. For everyone but the driver(s), a long trip meant a chance to type field notes, journal entries, or log material; to watch videotapes; to compare thoughts; to eat; to sleep. Thus, the van introduced very real efficiencies in terms of time. I would estimate this efficiency ratio at a factor of about 2.0.

Fifth, I'm not so sure that efficiency is everything. As elsewhere, there may be an efficiency/effectiveness trade-off. In this case, some effectiveness may have been lost to the driven quality that characterized the feverish collection of data, writing of notes, entering them into the PC, and other compulsive research activities (my own included). As I have discovered, it is easy to get sucked into the need for a sense of completeness. I still wonder, however, if it might not be better either to proceed more slowly and reflectively or to collect the materials now and write them up for Christmas. After all, that is what my grandfather did when he wrote his log.

Sixth, I wonder if the emphasis that some of us place on the distinction between field notes and journal entries might not be misdirected. True, it adheres to the traditional practice in naturalistic inquiry. Yet, often, the field notes amount to little more than a (partial) transcript of what is already on tape, whereas the journals sound like "Dear Diary" material that has no real support in concrete events. Hence, the all-important interaction between objective reality (if there is such a thing) and the researcher's subjective impressions may tend to slip between the cracks. I am aware that anthropologists and ethnographers prefer to do it this way. But that does not necessarily make it right for purposes of this particular Odyssey and related projects.

Seventh, as an alternative, I have tried to focus on writing a "log" that combines aspects of field notes and journals by describing my own experience of our sites and in-

interviews. These experiences involve an interaction between the objective reality of the data and the researcher's own subjective interpretive responses. A positivist wants to eliminate the latter. But, increasingly, post-positivists have recognized the impossibility of such a reduction. The log format may help us put the researcher back into the research. I hope so.

Eighth, such a device will help us only to the extent that we really do care about our experience of the research process. When I began the Odyssey, I thought that the main point was to study other people (as consumers). Increasingly, however, I have realized that, for me, the main point has been to study myself -- myself as a consumer and myself studying other people as consumers. The Odyssey experience seems well-suited to providing the latter kinds of insights. Most of what I have learned on the Odyssey and tried to convey in my log concerns the nature of that research experience.

Ninth, I remain aware that any conclusions coming out of my log should be viewed as preliminary and tentative. The log provides an interpretive, personal account of what one researcher experienced during a ten-day portion of a summer-long journey that involved many people. Their accounts will doubtless differ from mine and should be studied and compared accordingly.

Tenth and last, I am more grateful than I could have anticipated for being allowed to participate in this adventure. The Consumer Behavior Odyssey was and is a grand idea -- something like a "grand" house, but applicable to events of the mind and spirit -- in which several colleagues have allowed me to share their most private and profound thoughts and feelings. Where else could I have found such friends and fellow travelers? Where else, indeed, could I have found a project so vast, so heroic, and so beautiful as to raise Ulysses from the dead?

KEEPING THE MONKEYS AWAY FROM THE TYPEWRITERS:
AN ANTHROPOLOGIST'S VIEW OF THE CONSUMER BEHAVIOR ODYSSEY

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Abstract

In this essay, the Consumer Behavior Odyssey is subjected to a premature personal evaluation. The project is viewed in both its scientific and mythopoetic aspects, as a significant pilot with potentially profound long term consequences.

Introduction

This essay is an idiosyncratic reaction to a picaresque research project. The project itself was intended to build upon Tucker's (1967) long neglected call for truly innovative research into the foundations of consumer behavior. The essay is more impressionistic than analytical, insofar as little analysis of primary field materials has yet been conducted. Rather, I will seek to interpret the significance of the project from an anthropological perspective that is highly personal.

The Odyssey has its origins in the dissatisfaction of a handful of researchers with the excessive reliance of their colleagues upon a logical positivist paradigm to interpret consumer behavior. It has been said that if a roomful of monkeys were seated at typewriters and allowed to bang randomly upon the keyboards, they would eventually produce the entire works of Shakespeare. Norbert Weiner (1964), the father of modern cybernetics, once observed that one of the needs of science is to keep the monkeys away from the typewriters. This marvelously ambiguous directive is the theme I intend to explore in this essay. I will attempt this exploration with the same ragamuffin, barefoot irreverence Bronowski (1973) expected of serious students, and with the same fine disregard for rules that William Webb Ellis displayed in originating the distinctive feature of the rugby game. Both of these principles are exemplified in my Odyssey fieldmates, and together provide an appropriate inscape for the task at hand.

In many ways, the spirit of Jack Kerouac presided over the Odyssey. Temple's (1986) interview with William Burroughs captures something of this presence. "Jack Kerouac was a writer," says Burroughs. "Many people who call themselves writers and who have their names on books are not writers - the difference being, a bullfighter who fights a bull is different from a bullshitter who makes passes with no bull there. The writer has been there or he can't write about it. And going there he risks being gored." Similarly, the Odyssey fieldworkers have been there, and have come here today to risk being gored. As a member of the research team, I will attempt something of a pre-emptive goring.

A number of monkey-and-typewriter disputes currently animates consumer research. Among the paradigms contesting for interpretive primacy are those labelled logical empiricist, sociopolitical, subjective world, and liberating (Arndt 1985; Morgan 1980). Analytic scientists, conceptual theorists, particular humanists and conceptual humanists are among the types of researcher currently investigating consumer behavior (Hirschman 1985; Mitroff and Kilmann 1978). Shweder (1986) has recently taken us on an amusing tour of the emic hierarchies of science that has social scientists deferring to physical scientists, who in turn defer to physicists, who in their turn defer to mathematicians who claim their work is ultimately quite mystical and intuitive. Each of these disputes distract us from the critical intramural issue in consumer research. At issue is our ability to discriminate between genuine, or competent research on the one hand, and spurious, or incompetent research on the other,

no matter which intellectual tradition is averred as the researcher's home turf. Holbrook's (1987) eloquent plea for the sheltering and nurturing of "new" approaches in consumer research may help buy us enough time to make this discrimination possible.

Picaresque Paradigmatic Pluralism

A number of concerns have driven my participation in the Odyssey, and have shaped my perception of its significance. First in importance is my fascination with metaphor. Several authors in particular (Arndt 1985; Fernandez 1974; Gusfield 1981; McCloskey 1985; Turbayne 1962; Turner 1974; White 1978) have influenced much of my recent thinking on the ideological consequences of metaphoric discourse. No way of knowing is exempt from the influence of metaphor, and this notion needs to be injected quite forcefully into the mainstream of consumer research. Several distinct metaphors and their variants appear to be contesting for a hearing within the field. Turbayne (1962) wisely suggests that three options are available to supplanters of paradigms. You can lose awareness of your metaphor and mistake it for literal truth; you can treat your metaphor as an allegory yourself, but offer it for literal consumption to other people and other times; you can realize there are no proper sorts into which facts must be allocated, but only better metaphors. It is this third option that seems most viable, and which reminds us to be aware that our adoption of a metaphor alters our attitude toward facts.

A second motive for embracing Belk's picaresque proposal is my sense that some sea change in consumer research is in progress. This change is less an incipient paradigm shift than a mild irritant at this time, but this heretical spirit has already infused enough of a critical mass of researchers that some hope exists for accretion of new knowledge. Whether we tilt at windmills like Quixote or carry our oar inland to be identified as a winnowing fan as Odysseus once did remains to be seen.

A third incentive for joining the Odyssey stems from my dismay over weird science and killer paradigms. In our pursuit of normal science, most of us protect the investment we have in our training (and in our sense of self) by advancing our research orientations as more than one mere way of knowing. We also search for (or assume we have) a model capable of explaining consumption in all its complexity, rather than entertain seriously the notion of some scholars (Barrett 1984; Levine 1985) that since ambiguity and uncertainty may be the norm of social life, our models must incorporate ambiguity. To politicize their efforts to complement or supplant accepted approaches to consumer behavior, some researchers have taken to promoting alternative approaches as "weird science." This politicized stance is a mispositioning of the critical issue of pluralism, and may alienate as many potential recruits to the cause as it attracts naive converts; the concept implies an anarchic or irrelevant iconoclasm, and wears a tainted halo. The pluralism enshrined by Hirschman (1985) may as easily be entombed by Hirschman (1986) if this metaphor is popularly adopted. As a compromise between weird science and killer paradigms I suggest we consider Malinowski's "coefficient of weirdness" - the power of words to unite the user with the beings to whom he or she wishes to connect - to apply to all of our research efforts.

A final concern prompting my participation in the Odyssey is the growing interest I detect among practitioners in ethnography. Several recent trade press articles have praised the merits of ethnographic research as practiced

by ad agencies and marketing consultants, but reveal little understanding of that approach. In fact a range of "ethnographic" approaches, linked by little more than labels, has prompted me to think in terms of the good, the bad, and the ugly in qualitative research. We have traditional ethnography, the long term labor intensive field immersion favored by academic researchers. We have "adnography," a kind of rip-and-run hot-button solution to the need of managers for intimate yet efficient contact with contextually embedded consumers. Finally, we have "blitzkrieg ethnography," which combines some of the best and worst features of the other variants. Blitzkrieg ethnography provides just enough field exposure to tantalize and to aid hypothesizing, but not enough for comprehensive understanding. By joining the Odyssey, I gave up my fear of becoming a member of a qualitative SWAT team in favor of experiencing the tension between blitzkrieg ethnography and what Whyte (1978) has called diagnostic research.

Comforting myself with the Odyssey's emergent design, its interesting balance of individual initiative with the buddy system, and its fascinating mix of principal investigators, I drew up a list of researchable issues. On my list were small group culture, secondary markets, ethnicity, tourism and market pitching. My negotiated participation was to be a comfortable one. Base field sites at which ongoing research was unfolding, coupled with more extemporaneous, free-form investigations in transit between fixed sites I found to be a workable compromise. That the project would become a travelling seminar, or on-going workshop of sorts, at which professional researchers would both teach and learn, was perhaps its most appealing feature.

Scientific Aspect: Naturalistic Inquiry

In the absence of an analyzed corpus of field data, I will discuss briefly what I think to be some of the major strengths and limitations of the Consumer Behavior Odyssey. The reader is advised that these remarks are tentative and exploratory; certainly some of them may be revised as the field data is analyzed and shared.

Substantively, the project has several major strengths. Given the political field within which interdisciplinary research into consumer behavior is conducted, perhaps the most significant aspect of the project was that it was funded, and funded well. Funding would seem to be a clear signal of the promise of a project, especially one as exploratory as the Odyssey. Multiple funding sources - advertising agencies, Marketing Science Institute, numerous universities - and multiple types of backing - grants, equipment, lodging, personnel - are further indicators of the appeal of a novel approach. The use of numerous venues as research sites allowed for a kind of horizon expansion and comparative investigation atypical of consumer research in general; multiple venues made it possible to honor the spirit of Tucker's (1967) call for foundation work. An infrastructure of contacts, informants and colleagues established during the project will become the basis for longer term follow-up investigations of selected phenomena. Studies begun on the summer pilot will be continued and extended by project personnel in the coming year. The creation of a research culture and a consumer franchise to speed acceptance of naturalistic inquiry into consumer research is among the most significant of the Odyssey's accomplishments. A larger critical mass of naturalistic inquirers and an audience more receptive to postpositivist methodology have each been generated through the project. The establishment of an archive to house and circulate data collected during the Odyssey is another major contribution of the project. Once suitably altered (via pseudonyms, etc.), Odyssey data will be made available to researchers outside of project personnel. A final substantive strength of the project was the opportunity it afforded participants for personal growth. Shweder (1986) has observed that good ethnography is an intellectual exorcism in which we are wrenched out of our self. Each of the participants shared such an experience, and increased his or her acuity as an

instrument in the bargain.

Methodologically, the Odyssey exhibited several distinct strengths. The use of participant observation and emergent design to study consumer phenomena, and the express avoidance of survey or laboratory methods of any type, are significant in their own right. The meticulous recording of data through journals, fieldnotes, audio- and videotapes, photographs and artifactual collection, all with an eye toward auditing by scholars not affiliated with the project, and toward eventual deposit in a public archive, should serve as a benchmark for subsequent naturalistic inquiry into consumer behavior. The use of an interdisciplinary team approach to inquiry, rare enough in consumer research of any kind, is an especially significant contribution. Logistical headaches and intellectual property rights disputes notwithstanding, the melding of disciplinary (and school) perspectives and the level of adversarial discourse in the service of consumer research themselves were a wonder to behold. The daily Odyssey audit - and its peripatetic cousin, the periodic Odyssey audit - that helped shaped the emergent design of the project and kept inquirers close to the corpus was another methodological plus. Finally, the techniques of auditing, autodiving and member checking helped provide an integrity to the project that is often lacking in other qualitative studies.

A number of substantive shortcomings are evident in the project as well. Principal among these was the phenomenon I have taken to calling "mesomorphic" description. Many of the observations and insights notched by the project fall along the clinal zone between the "thick description" (Geertz 1973) to which the inquirers aspired and the "thin description" to which we have become accustomed in consumer research. Short term field immersion and pressure to produce a tangible project conspired in many cases to produce description that, while contextually rich, lacked much of the fullness that might have been captured. An outgroup focus also produced a serious flaw in the research. For a number of reasons, no systematic ethnography of the small group research culture was attempted, leaving only journal entries and post hoc anecdotal material (including some marvelous war stories) from which some retrospective account might be constructed. Finally, division of labor among Odyssey researchers was suboptimal throughout the project. The merits of redundancy are considerable, if pursued strategically. However, a large and continually changing crew, along with some belief in the possibility of consensus, militated against efficient use of each member's talents.

Methodological shortcomings are also apparent. The tension between blitzkrieg ethnography and diagnostic research to which I earlier referred was a source of concern. As if he or she were some curious hybrid of Levitt's (1983) derivative fox and hedgehog, the researcher often felt at turns quite knowledgeable and quite ignorant; myopic at one time, hyperopic at another. Feelings of being spread too thin, or of being the proverbial "kid in a candy store" accompanied this tension. As the summer progressed, the group became more proficient at observing and interpreting common phenomena across sites, but the exploration of solitary and ephemeral phenomena proved more problematic. Flawed enculturation rituals also marred some of the cohesiveness the group might have been expected to attain over time. More attention to building organic solidarity within the group would have produced a collective instrument of greater acuity. Finally, the curious high tech/low tech learning transitions that each inquirer experienced in acquiring new research skills served to impair competence and performance over time.

To render a judgment that may be clearly premature, I viewed the Odyssey from a scientific perspective as an important pilot study with significant long term potential. Whatever substantive research reports are generated may be expected ultimately to be dwarfed by the secondary gains or ripple effects the project will produce. As a benchmark study, the Odyssey succeeded in getting a

naturalistic foot into the door of legitimate consumer research concerns. It seems to have been an enterprise toward which few researchers were indifferent. A quick head-count of sympathizers and detractors suggests that the project succeeded in capturing the imagination of the field at large. In the following section, I will attempt to interpret the significance of that imagination.

Mythopoeic Aspect: The Heroic View

If we allow full play to the metaphor that undergirds the Consumer Behavior Odyssey, it is not presumptuous to suggest that the ultimate significance of the project is its mythopoeic value. Belk has advanced what might be glossed as a heroic view of consumer research, and I will explore briefly some of the mythic aspects that contribute to that vision.

Heroism in classical perspective is enshrined in two prominent vehicles. The first is the epic. Epic heroes traditionally exhibit qualities of fortitudo and sapientia. Fortitudo is strength that ranges from the merely physical to the nearly mystical. Sapientia is wisdom that ranges from street smarts to true enlightenment. Both are qualities that enable the hero to prosper in an imperfect world. The route to self-fulfillment has varied narrowly through time. The heroes of Homer and Virgil (Achilleus, Odysseus, Aeneas) travelled the sea. Those of Spenser, Cervantes and Fielding (Arthur, Red Cross Knight, Don Quixote, Joseph Andrews) travelled the open road. Mailer's heroes (Aldrin, Armstrong) travel space, while those of Kazantzakis and Milton (Odysseus and Satan) travel, and become, the cosmos. Latter day heroic travelers such as Kerouac, Kesey and Kurault provide a contemporary genealogical link between the classic heroes and Belk's Odysseans. The heroic view of consumer research casts alternative paradigms as the principal actor.

The second heroic vehicle is ritual. I will use Campbell's (1949) monomyth as the archetypal heroic ritual. Campbell views the nuclear unit of the monomyth as a cyclical process of kathodos (a down-going), katharsis, and anodos (an up-coming). The hero ventures forth from the everyday world into a region of supernatural wonder. In his encounter with "fabulous forces," the hero wins a decisive victory and returns from his adventure with the power to bestow boons on others. Once again, Belk's Odysseans propose that the naturalistic paradigm, having been tested in radical encounters with the other, be adopted by researchers.

Another mythic interpretation of the Consumer Behavior Odyssey frames the project as a rite de passage. In Van Gennep's (1960) scheme, rites de passage have a tripartite structure: separation (detachment from a stable, fixed sociocultural state), margin (a terminal phase characterized by ambiguity and communitas, during which an individual is betwixt and between familiar classification), and aggregation (return to classified, secular social life). This progression from structure through antistructure back to structure (Turner 1969) is precisely the pattern followed by the Odyssey project, at both the literal, physical level and at the abstract, paradigmatic level. Just as the Odysseans dropped out of their traditional social roles and created a community of the road before returning, so also did they renounce traditional disciplinary affiliations and models to embrace alternatives, before returning to the fold.

A final mythic view of the Odyssey equates the project with a pilgrimage. The process of the pilgrimage is described succinctly by Turner (1978); the goal of the pilgrimage is specified by Tucker (1967). According to Turner (1978), pilgrimage is characterized by such factors as release from mundane structures, homogenization of status, communitas, ordeal, reflection on the meaning of basic religious and cultural values, emergence of the integral person from multiple personae, movement versus stasis, and individuality posed against institutionalized milieu. Given the metaphoric correspondences established earlier, the Odyssey clearly qualified as a pilgrimage,

and can be interpreted as a metasocial commentary. A pilgrim is an initiate entering into a deeper level of existence than he or she has known in a customary setting; the pilgrim confronts, in a special, "far" milieu, the basic elements of his or her faith (Turner 1978). Perhaps the most potent qualifier of the Odyssey as pilgrimage can be quoted directly from Turner: "... in the present age of plural values, increasing specialization of function and role, and potent mass communication ... pilgrimage ... serves ... to recollect, and to pre-empt, an alternative mode of social being ... Thus out of the mixing and mingling of ideas from many traditions, a respect may grow for the pilgrimages of others (1978)." Belk's Odysseans sought Tucker's foundations as one way of advancing consumer research.

Conclusion

On my way out the door to join the Odyssey launch, Sid Levy advised me to beware of sirens. As always, his advice is sound. Whether naturalistic inquiry is in fact the winning fan that Odysseus' oar must become remains to be seen. I am satisfied that I spent my summer vacation merging the ludic with the ergic. I can think of few more effective strategies for monkeying with typewriters.

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ON THE ROAD AGAIN: THE NATURE OF
QUALITATIVE RESEARCH ON THE CONSUMER BEHAVIOR ODYSSEY

Melanie Wallendorf, University of Arizona

"On the road again,
Like a band of gypsies we roll down the highway."

Willie Nelson
"On the Road Again,"
Willie Nelson's Greatest Hits
(And Some that Will Be),
Columbia Records

This paper is a general, somewhat personal reflection on the experience of being on the Consumer Behavior Odyssey for roughly two months this past summer. As the traveling part of the Odyssey was only recently completed, this paper, and the presentation which accompanied it, do not provide conclusive, substantive findings. Instead, this is meant to provide an update on "how I spent my summer vacation." As such, this paper is similar to the journal entries written by Odyssey participants on a daily basis to accompany their field notes.

The slide presentation which accompanied this talk visually portrayed the informants and the inquirers who participated in the Consumer Behavior Odyssey. Showing an entire summer in less than three minutes is not easy. However, the experience of watching a summerful of research in three minutes is much like the experience of being on the Odyssey. There was often a feeling that the pace was too fast, that we would like to stop the data collection for a moment and look at it more slowly and in more depth.

That is the stage that the Odyssey is currently in. It is as yet too early to offer conclusive findings as we have only just returned from the field and are now taking that slower, more in-depth look. Instead, this discussion will focus on the particular qualitative approach taken by the Odyssey in gathering data. Although we are currently exploring the themes which run through the data collected, these will not be the focus here.

The basic question to address is what it is that is so different about this research project. Certainly it has been seen as different by many. However, I have often had the sense that it is perceived as being different for the wrong reasons. In summary, what is different about this research was that we were constantly "on the road."

Contrary to what some might think, this research is not different or unusual by being qualitative. It is not unusual in its collection of approximately 800 pages of field notes, journals, and logs, nor in its shooting of approximately 3500 still photos, nor in its taping of approximately 60 hours of videotaped discussions with informants. In fact, qualitative field work is a very commonly used social science-method. It is certainly a more traditional social science method than are surveys and experiments, which have somehow come to be seen as the norm in the relatively young field of consumer research. Qualitative research methods are traditional in the same way that the swap meets, flea markets, fairs, and festivals studied by the Odyssey are more traditional markets than are the fast food outlets, supermarkets, and shopping malls which seem to be the focus of most marketing-oriented consumer behavior research.

Thus, what is different or nontraditional about the Odyssey is that it was constantly moving. Rather than the in-depth study of one site which is accomplished by a traditional ethnography, the Odyssey defined its site or context very broadly as being American consumption including the full range of acquisition, use, and

disposition activities. We then purposively sampled and moved within this context to provide contrasts.

Clearly, first to emerge as a contrast was what we thought was "not like me" or different from our own lives. This forced us to view ourselves, but also to move beyond this introspection. Although I have not systematically analyzed our field notes yet to test this notion, I would propose that it is likely that the sample observed, excluding ourselves, has a slight downscale bias. This is probably different from survey and experiment-based consumer behavior research which invariably notes a slight upscale bias to the sample in terms of income and/or education.

Sampling for contrasts, however, soon made us realize that across these supposed contrasts co-existed some similarities. For example, materialistic concerns with "stuff" led us to attempt to sample some individuals who were expected to be somewhat non-materialistic. Two types came to mind and both were interviewed. The first type of non-materialistic informant was a person who is revered and respected for having chosen a non-materialistic lifestyle. Nuns who take a vow of poverty were interviewed. Why do they do such a thing in a materialistic culture? The answer was cast in terms of being better able to serve others. A second contrasting type of non-materialistic informant is one who is socially spurned and rejected for this lifestyle. Homeless people were interviewed. Why do they do such a thing in a materialistic culture? The answers here are complex. However, in one case a man entered a shelter for the homeless because his mother and sister had been taking his subsistence checks and spending them. They had done him a disservice. Thus, where we expected to find contrasts, we also found similar themes, in this case service, cutting across them.

To take another example, we sampled to find contrasts within informants. In interviewing the wife of a wealthy entrepreneur who talked about the stability of her home and life, we also asked about losses that she might have experienced. She discussed losing the clay handprints her children made in kindergarten when her home was recently remodelled. In interviewing a transient man about what it is that provides sufficient stability to his life that he keeps going, he talked about his longing for a son who was lost in a divorce and his desire someday to get his baby back. Once again, what was expected to be a contrast showed a commonality linking the two.

As we moved across country, we saw parallels to our own moving in informants who were moving: vacationers, long distance movers, and wanderers. We saw their changes, and in some cases our own, as reflecting role transitions in which identity and material objects change and mutually shape each other. This is a theme which we will be analyzing further in the data. We saw informants selling possessions in anticipation of moving, but also talked with them about saving treasured possessions, such as ceramic watermelons, to provide security and stability through the transition.

For us, as well as for them, there was uncertainty as to what lies ahead down the road. Yet this was combined with a hope for greener pastures, a curiosity for something new that kept us moving. Yet this movement caused in us some disorientation. We experienced the intertwined nature of time and space by learning that as one of these elements changes, we lose sight of the other. My audio taped recordings of where we were at

what time were crisp and accurate in Los Angeles, but soon became more confused and halting, until the New York/New Jersey/Connecticut borders were a blur to me. We saw in ourselves, as well as in our moving informants, a building of and clinging to security bases while in transition. For example, those who traveled on the Odyssey for the longest periods of time showed strong attachment to the RV as home (despite strong a priori attitudes to the contrary), as well as the development of small group culture in shared food rituals such as Oreo consumption.

With so much change and movement, how does one build stability in a moving research enterprise? How did Odyssey participants insure some continuity in the focus of the research? Storytelling was employed as an interview technique for getting reciprocal storytelling. This involved informants in our lives as we shared with them stories about ourselves and what we had seen previously. This technique also allowed us to carry forward on themes which had emerged earlier. For example, our descriptions of the self-sufficiency of motor homes in Las Vegas led to comments about self-sufficiency when talking with a cross country bicyclist and some backpackers in a national park. Similarly, some vacationers at the Statue of Liberty asked us if we had talked with any bicyclists, which allowed us to tell some stories and then ask them to make comparisons between their own vacation style and that of the bicyclist.

Thus what is different about this research is that we attempted depth and full elaboration of themes across sites rather than elaboration of all themes within a site. Doing the latter may not tap all aspects of a theme, because its full range may not exist within a site. Instead, we attempted to sample in order to fully capture the theme across sites rather than all themes within a site.

This meant that we always had to move on, making for what was in many ways a moving experience. What did we find? It is too early to say what we found. The only conclusion I can offer now is:

"The life I love is making music with my friends,
And I can't wait to get on the road again."

Willie Nelson
"On the Road Again,"
Willie Nelson's Greatest Hits
(And Some that Will Be),
Columbia Records

HOW WE SPENT OUR SUMMER VACATION: A PRELIMINARY REPORT
ON THE 1986 CONSUMER BEHAVIOR ODYSSEY

Harold H. Kassarian, UCLA

Abstract

The following comments briefly present how the 1986 Consumer Behavior Odyssey came to pass. The papers that follow represent the preliminary report of the odyssey participants to the consumer research community.

Introduction

By now one can assume that everyone knows about the infamous 1986 Consumer Behavior Odyssey. Yet few seem to know much of its inception. Hence, first let me back up and recall how it all began.

In January 1985, Russ Belk sent out nine copies of a letter to:

Beth Hirschman
Morris Holbrook
Sid Levy
Jerry Olson
Dennis Rook
John Sherry
Melanie Wallendorf
Bill Wells
Myself

Belk's idea was for a small group of consumer researchers to travel from coast to coast one summer in order to qualitatively document various buyer and consumer behaviors via video-taped interviews, unobtrusive still photos, field notes, audio tapes, and impressionistic journals.

The goal was to approach people shopping, buying, and consuming products and services in a largely unstructured way, without a priori hypotheses, to obtain archives of data for whatever teaching, research, or learning purposes we could devise. Belk felt that data collection sites might include high end department stores, discount stores, and garage sales. Also flea markets, county fairs, tourist attractions, restaurants, picnics, weddings, and even brothels, dance halls, the opera, rock concerts, etc.

The reaction was enthusiastic and many who heard of it felt an excitement - the thrill of embarking on a new direction for the field. To many, consumer behavior had become boring, and to many this was a chance to head in a new direction.

To me it was something akin to the interest that was generated when ACR was first proposed, or publishing of Proceedings was suggested, or the publishing of a new Journal, JCR. For here would be something new, something different - atheoretic descriptive data that could be used to generate theories, test and prove theories, and be used to better understand what the phenomenon of consumer behavior was all about. The closest precedent in marketing was W.T. Tucker's Foundations for a Theory of Consumer Behavior (Holt, Rinehard & Winston, 1967). And Tucker, had failed in his implied goal. It was an idea before its time. Maybe now the time had come.

But, others had a different agenda. Some had become distressed by, "the tendency of academic researchers to migrate from real consumers to theoretical never-never land." Here was a way, those people felt, to bring bright researchers back to reality. And still others felt that this would be an opportunity to study topics that had not been touched by the field - flea markets, junk stores, repossessions, circuses, fairs, the de-acquisition process, etc.

Thus each seemed to have his own agenda, and with it came a very serious risk. For the methods of qualitative research - ethnography, humanism, relativism, and anti-positivism tend to attract not only the most talented and most creative researchers, but also the very weakest - those individuals who can't distinguish between an R square and a Chi Square. Those who are unable to design a tight experiment, do sophisticated analyses, or conduct solid empirical research are also attracted to the new approach. There were ominous signs that this could happen; but, interestingly, it did not. But that is another tale.

The first meeting of the planning group was to be held inconjunction with the Winter AMA meetings a few weeks later. In a restaurant, preliminary decisions were made over a communal dessert, the beginning of much communal activity. Among those there were Russ Belk, Melanie Wallendorf, Beth Hirschman, Jerry Olson, John Sherry, Valerie Folkes and the Kassarians.

It was here decided that: the odyssey would occur during Summer of 1986; that we all needed to acquire skills in interviewing, videotaping, oral history writing, and all those other skills not taught in research courses; that professionals such as cinematographers and people with skills in documentary production would be necessary; and it was decided that the next meeting would be at the ACR meetings in Las Vegas in October 1985.

In the coming months new faces began to appear: Tom O'Guinn - the needed photographer and cinematographer, Rick Pollay - the Archivist, Alan Andreasen, Jeff Durgee, Feiffer, Heisley, Johar, and Keith Hunt.

Funding for a pilot by the Marketing Science Institute had by now become a reality. In November 1985 the three day pilot was carried out in a place we call the Red Mesa Swap meet in New Mexico with Belk, Sherry and Wallendorf participating. With its success, and in quick succession, additional funding came from MSI; Needham Harper Worldwide; Foote, Cone & Belding; the Universities of Illinois, Utah, Arizona, California, and Northwestern among others. In all:

- * in excess of \$35,000,
- * hundreds of rolls of film,
- * hundreds and hundreds of reels of 3/4 inch videotape,
- * dozens of audio tape cassettes,
- * portable computers,
- * tape recorders,
- * cameras and videorecorders and portable batteries,

were to appear under the direction of Russ Belk and Melanie Wallendorf.

And a 27 foot recreational vehicle was rented for the summer. The first phase of researchers gathered in Dennis Rook's apartment in Los Angeles in June 1986. Miracle of miracles, it had started. The first interviews and the first set of data was to be gathered by Sherry, O'Guinn, Belk and Wallendorf with the assistance of Folkes and Buchanan. Shortly after, the RV left for Las Vegas, Salt Lake City, Denver, Chicago and points east. And the Odyssey was on its way.

What is it that was accomplished? What is to be done with mountains of descriptive data, hundreds of hours of video and audio tapes, and dozens of floppy computer disks - recording the feelings, opinions, values and attitudes of so many consumers; not to mention the feelings and reactions of more than a dozen researchers?

And what will come of the innumerable experiences, stories and tales without end? Tales of bright, talented researchers, crammed for days on end in a RV that was to be at once a study, a bedroom, a bath, a darkroom, and a kitchen.

Is this science, is this research, or is this amateur journalism? In many ways the controversy that has surrounded the project and its approach of naturalistic inquiry reminds me of a time in the history of consumer behavior that predates ACR. Marketing departments were run by the structuralists and functionalists who could not understand what we were all about.

And with all that was in them, they resisted the ideas and contributions of the emerging breed of behavioral and quantitative researchers. New and different ideas from mathematics, psychology, statistics, sociology, and computer science were encroaching on those souls. Those old timers fought valiantly to protect their turf; but eventually had to give way and make room for the rest of us - empirical researchers and logical positivists that we were.

To many Odyssey participants, but not all of them, naturalistic inquiry is believed to be richer and superior to the empiricism and logical positivism of today. And to the opponents of the Odyssey the whole affair is assumed to be an anti-scientific boondoggle of major proportions. Fortunately, in the field of consumer behavior there is room for those that get excited by conditioned dogs, for those that prefer the laboratory with its tight controls and one-way mirrors, for the researcher that insists the only way to collect data is in front of a computer screen; and surely for those that prefer to study consumer behavior from behind a video-camera, the roof of a recreational vehicle, or by holding a microphone of a tape recorder.

As our field moves on, the critical question is: Is the work science of the highest calibre and is it making a legitimate contribution to our knowledge of consumer behavior? The first of the answers will appear in proceedings, journals and monographs in the coming months and years. For a little peek under the covers, let us turn to the papers that follow.

A SOCIAL INFLUENCE THEORY OF CONSUMER COOPERATION

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Abstract

The need to gain cooperation of service consumers in order to improve service productivity has been recognized (Mills, 1983; Lovelock and Young, 1979; Bateson, 1985 a,b). This paper suggests a framework to treat consumer cooperation as a consumer behavior variable to be managed by marketers. Cooperative behaviors can be classified into compliant, identification, and internalized behaviors based on Kelman's (1958, 1961) theory of social influence. When Kelman's theory is explicated in terms of identity theory, testable hypotheses and managerial implications can be derived.

Introduction

This paper proposes that consumer cooperation be regarded as a consumer behavior variable, just as consumer choice, search and purchase are studied as consumer behavior variables. Toward this end, this paper will first define cooperative behavior as a general form of consumer behavior which can take on service-specific and situation-specific forms. Specifically, consumer cooperation may involve public conformity, as when consumers respond to instructions from police or emergency room personnel, or may require private acceptance, as when students must engage in the learning process or patients must change eating and drinking patterns. Cooperation occurs after purchase and represents a part of the consumption experience.

It is suggested here that cooperative behaviors can be categorized by these influence processes, with implications for marketing managers and researchers. Moreover, the framework of identity theory provides additional support as well as a basis for generating testable hypotheses of Kelman's trichotomy. Marketing managers can utilize this framework to clarify the kind of cooperation desired from consumers, to design service encounters that facilitate cooperation, and to avoid presenting consumers with "mixed messages" by requesting cooperative behavior patterns which have their basis in conflicting motivations.

What Is Cooperative Behavior

Cooperative behavior is defined as behavior which facilitates provision of service for the consumer or for other consumers present during the service encounter. Consumers using services, from parking lots to medical care, must interact with the service provider and often with other consumers who are using the service simultaneously. This interaction influences not only the quality of service they receive, but service received by fellow consumers as well. Noisy diners, parking lot customers who block other cars, consumers who slow down a line through ignorance of procedures, people who come unprepared to appointments, all jeopardize service quality and sometimes even the provision of the service. Moreover, to enhance productivity, firms often ask consumers to participate in the production of the service, or "servuction" process (Eiglier et al. 1981) by pumping their own gas, carrying their own bags, or clearing their own tables. Consumers are asked to participate in tasks otherwise performed by the provider, or, in effect, to help the provider.

Thus, cooperative behavior has links with helping behavior and altruism. However, helping behavior is usually operationalized in terms of the stronger, or more powerful, person helping the weaker. In contrast to these situations, consumers in service encounters often feel less powerful than the providers with whom they are cooperating, such as doctors, lawyers, or college professors. Even when consumers feel strong and powerful in relation to individual service providers, such as waiters and bank tellers, they may have trouble perceiving them as needy.

Additionally, norms for helping may be somewhat more ambiguous because consumers are paying for the service; there may be a sense of, "I'm paying for this so why should I have to do the work?" Another paradigm is needed to explain the motivation of consumers to cooperate with service providers.

At least two authors have directly addressed the issue of consumer cooperation. Mills (1983) identifies two categories of cooperative behavior, based on whether the client smooths service delivery (e.g., by arriving on time) or facilitates the service interaction itself (e.g., by preparing in advance for a meeting with a tax preparer). Bateson (1985 a, b) has directed research attention to one aspect of cooperative behavior, self-service. This research needs to be extended to take account of psychosocial factors which affect the consumer's willingness to enact cooperative behaviors, and to explicate the wide variety of cooperative behaviors which can be and are actually required of consumers. Police officers, doctors and professors want consumers to follow their instructions, but not necessarily in the same way. Many firms want customers to utilize self-service equipment, such as pumping their own gas or using an automated teller, or simply carry out tasks otherwise performed by employees, such as clearing one's own table. Some firms would like customers to take responsibility for their own and even other customers' service experience; for example, hospitals and psychotherapeutic services may expect patients to help each other; a theatre expects people to be attentive and not disturb others; universities expect students to take responsibility for academic achievement. Some services call for a variety of cooperative behaviors: an airline might request that passengers read the seat card instructions about safety and familiarize themselves with connection requirements; remain seated while the plane is taxiing to the gate; fasten seat belts at certain times and remain out of the aisles during meal service; provide their own reading material and entertain themselves as well as their fellow passengers; and use whatever self-service baggage and ticket facilities are provided. On the other hand, gas stations may be concerned with only self-service aspects of cooperative behavior, while police and emergency room services will be concerned with short-term following of instructions.

Because these cooperative behaviors are enacted in the setting of the service encounter, they are influenced by the role relationship between the service provider and the customer, the service consumer (Solomon et al. 1985). Consumers who engage in frequently-repeated service interactions may include forms of cooperative behavior in their scripts of the service encounter, while those encountering new services may need to incorporate cooperative behavior in their scripts (Smith and Houston 1983; Schank and Abelson 1977). Furthermore, the degree to which consumers feel in control of the service encounter (Bateson 1985 a and 1985 b) may affect their willingness to enact cooperative behavior.

It is suggested here that incorporating Kelman's (1958) theory of social influence process into these perspectives will provide unique insights into consumer cooperation. In particular, Kelman's three influence processes can be explicated in terms of social identity theory (Stryker and Serpe 1982). Identity theory focuses on the relationship between the individual self, roles and social behavior. In particular, identity theory studies concepts of commitment to roles and salience of social identities and uses these concepts to explain social behavior. Most important, many role-theoretic constructs applied to service encounters derive from the symbolic interaction framework which does not translate well into testable hypotheses of empirical issues; identity theorists attempt to derive

testable hypotheses and develop measurement tools for relevant constructs, such as identities derived from roles. Therefore, since identity theory offers a potential direction for researchers of service encounters, it will be useful as a perspective on social influence processes.

Compliance, Identification, Internalization

Both attitudes and actions of service consumers can be influenced by social processes arising out of the service encounter. Individuals can experience three levels of change or adaptation in response to three types of social influence processes.

Compliance occurs when a consumer accepts influence from the provider or other consumers because she/he wants to obtain a reward or avoid punishment. The "induced behavior" is adopted not because the consumer believes it is inherently beneficial, but because it produces a desirable consequence: "What the individual learns, essentially, is to say or do the expected thing in special situations, regardless of what his private beliefs may be" (Kelman 1961). Strong examples include police and other emergency services, which require consumers to simply enact certain behaviors in the short term in order for the service to be provided, and which provide strong punishments for uncooperative, non-compliant consumers. However, threats of unpleasant confrontations with fellow consumers can also result in compliant behaviors: fellow passengers may induce individuals to wait quietly in line or refrain from smoking, even in non-designated areas.

Compliance may not always be the appropriate response to be induced by service marketers. Individuals will not carry out the induced behaviors unless they are under the provider's "surveillance" (Kelman 1958), and it is necessary to limit the consumer's choices and perceived reward structure in order to gain compliant cooperation. In other words, compliance encourages the consumer to create a short-term favorable impression on the provider and others, and cooperation based on compliance may assume the consumer's dependence on the service firm (Jones 1965).

Therefore, when consumers must perform the behaviors out of sight of the provider, or when the consumer can seek alternate providers in a competitive industry, the marketer may want to generate other influence processes. For example, medical consumers may promise to follow instructions to avoid the penalty of disapproval from medical personnel, but disregard the advice once they get home; and if a bank penalizes consumers for using human tellers instead of ATMS, the consumer may simply change banks instead of cooperating.

Thus, the marketer may encourage consumers to cooperate through the process of identification: a consumer cooperates because he believes his behavior is "relevant to and required by a reciprocal-role relationship in which he is a participant" (Kelman 1961). Like compliance, identification does not depend on the consumer's adopting a behavior because she/he believes it is "intrinsically satisfying" (Kelman 1961). However, attitudes and behavior adopted through the identification process will be expressed only when the role relationship and the expectations of "alter" (McCall and Simmons 1978) become salient and attractive. Thus, students study and patients follow instructions because the roles associated with such behaviors are both attractive and salient; however, some people refuse to use automated tellers or clear their own tables because consumers have little wish to identify with the roles associated with such behaviors, or with the expectations of service providers acting as "alters" in those encounters.

In an attempt to predict which roles will become salient and influence behavior, Stryker (1968) suggests that various role identities which comprise the self, such as parent, political party member, business executive, charity volunteer, and friend, may exist in a "hierarchy of salience:" other things being equal, some roles are more likely to rise to consciousness and influence behavior in

a variety of situations while other roles may be "invoked" (to use Stryker's term) only in specific service settings.

For example, the role of "successful business executive" may be so salient to an individual that she/he invokes this identity when faced with an extended wait in a medical office or restaurant, while few people invoke the role-identity of "airline passenger" or "tourist" outside the relevant situations. Thus, the business executive who is more concerned with meeting role expectations of his/her business than those of the service provider or fellow consumers may refuse to wait quietly for service, while the airline passenger or tourist may have difficulty invoking role identities far enough in advance of a trip to make detailed preparations. Similarly, to use Mills's (1984) dichotomy, discussed above, task coordination behaviors require consumers to invoke role identities, while system maintenance behaviors may occur out of compliance.

Additionally, consumers are more likely to enact cooperative behavior induced by identification if they find the role relationship attractive. In other words, if there is a satisfying relationship with the individuals linked by the role relationship (Kelman 1961) which may also be characterized as commitment (Stryker 1968 and Heiss 1981) an individual will adopt and continue to carry out behavior in order to maintain the relationship. For example, cooperative behavior may be induced by identification at a health club or university class where consumers maintain a rewarding, role-based relationship with other members, but this process will not induce cooperative behavior in an outpatient or airport waiting area where people may prefer not to develop role-based relationships with others. Commitment and salience are interrelated: commitment may help make the role relationship more salient (Stryker 1980).

A final type of influence process, internalization, occurs when the consumer agrees to cooperate with the provider because this behavior fits in with an existing value system or is intrinsically satisfying (Kelman 1958). When a behavior or attitude is internalized, the consumer will enact or express it outside the context of the service relationship: the medical consumer will embark on a fitness program; the auto repair customer will read the owner's manual and follow the maintenance recommendations; the airline passenger will bring material to entertain him/herself on the flight. In these examples provider and consumer share norms surrounding role behaviors of medical, auto repair, and airline consumers.

Additionally, different consumers will attach separate meanings to the same roles; Burke and Reitzes (1981) found that college students attached various "identities" to the student role: as expected, students who associated the college student role with "sociability" meanings exhibited different behaviors than those who associated the same role with "academic responsibility" meanings. Service providers might expect that consumers will be more likely to internalize cooperative behaviors that are congruent with their "idealized" view of the role (McCall and Simmons 1978) as well as the meanings the consumer attaches to the role.

The framework can be used to generate propositions from Kelman's classification of influence processes. "Cooperative behavior" is defined here as "behavior the firm would like consumers to perform during the service encounter."

Propositions

- Ia. The lower the control experienced by consumers in the service encounter, the more they will be motivated to cooperate to gain rewards and avoid negative consequences.
- Ib. The more a cooperative behavior is motivated by short-term consequences, the lower the likelihood that consumers will enact the behavior when the provider and/or other consumers are absent.

This type of cooperative behavior corresponds to what Kelman calls "compliance." Consumers will follow directives of service providers ("Please fasten your seat belt") and coercive pressures of other consumers ("Hey, shut up over there!") to gain immediate rewards or, more often, avoid negative consequences, such as unpleasant confrontations or refusal of further service. This approach is appropriate in situations when an immediate response is required and/or the relationship is not expected to continue, so that developing other mechanisms to facilitate cooperation will not be cost-effective.

IIa. The more the consumer perceives the role relationship as attractive and salient in his/her hierarchy of identities, (a) the greater the likelihood that the behavior will be enacted in the absence of the provider as well as the absence of short-term rewards or punishments; and (b) the more likely the consumer will be to engage in cooperative behaviors which represent preparation for the interaction.

IIb. The more control experienced by a consumer in a service role relationship, the more likely the consumer is to accept the role identity and to find the role attractive.

This type of cooperative behavior corresponds to what Kelman calls "identification." Consumers want to follow role expectations of others in order to remain in a role relationship they find rewarding. They want to be seen as "a good customer" or "a nice fellow member" by providers and consumers in the service relationship. Moreover, consumers will identify with roles in which they experience control and will find those roles attractive. They will be less likely to accept an identity based on actions which they undertake from the motive of compliance; in fact, they may attempt to distance themselves from identities forced on them (Sykes and Brent, 1983).

Managers seeking to gain consumer cooperation by the identification process should emphasize consumer control of the service interaction to the greatest extent possible, so that consumers will perceive the relationship as attractive. Additionally, managers can increase salience of the relationship by generating reminder systems; as organizations, from dentists to auto repair shops, send out cards and newsletters between customer visits, they are increasing salience of the service and hopefully encouraging the consumer to engage in advance preparation for the visit.

III. The more a specific behavior is congruent with the meaning a consumer attaches to the role, the more likely the consumer will enact the behavior outside the context of the role relationship.

This form of cooperative behavior is, of course, associated with internalization of the behaviors desired by the service marketer. Consumers will carry out the desired behavior because it is congruent with their own values, not because it is requested by the provider or other consumers. They are following not the script designed by the service provider, but an "archetypal" script. Therefore, they will enact the behavior regardless of the current state of the service relationship.

To encourage this form of cooperative behavior, the marketer may need to emphasize the "admissions director" role (Lovelock, 1981) so that only clients who appear to have values congruent with the behaviors desired by the organization will be admitted. Many firms which require this form of cooperation lend themselves to this client screening process, including educational and medical firms. Additionally, whenever possible, firms can identify from a range of desirable behaviors those most congruent with client values; for some firms, the congruence can be established on an individual basis.

Both marketing managers and researchers have expressed concerns with productivity enhancement of services. One way to enhance service productivity involves enlisting the consumer as a participant in the "servuction" process. However, consumers can participate through a variety of behaviors, from clearing tables to pumping gas to developing a healthier lifestyle. What is needed is a theoretical framework to allow research into the determinants of cooperative behavior and to suggest guidelines to marketing managers as they interact with consumers.

The characterization of service encounters as hierarchical role relationships with a script available to the actors has been acknowledged in the literature. Moreover, consumers experience varying degrees of attractiveness and salience for each service relationship. These aspects of service role relationships will affect the potential of success for the three social influence processes of compliance, identification and internalization.

Service providers can utilize this framework to enhance consumer cooperation in at least three ways. First, providers need to become aware of the degree to which consumers perceive they have control in the service relationship. As consumers have less control, they will be more likely to comply, but less likely to internalize behaviors. Therefore, providers may want to attempt to increase the consumer's perceptions of control in order to get the consumer to take responsibility for certain aspects of the service. Medical providers may want to develop a sense of increased control to encourage patients to take responsibility for their own diet and exercise programs; banks may want to emphasize control rather than cost-avoidance as a reason for using automated tellers. Additionally, firms such as airlines must create low-control relationships which depend on compliance to induce such behaviors as seat belt fastening and clearing of aisles; however, those airlines may also want to create high-control perceptions in consumers to encourage them to take responsibility for their own amusement during a flight. The contradictions in such demands may result in uncooperative passengers.

Second, consumers who cooperate to benefit from role relationships will do so when the relationship is salient and attractive. Therefore, providers can emphasize the referent power of the role relationship and attempt to increase salience of the relationship by maintaining contact in between service intervals. Conversely, service marketers cannot rely on the identification process to gain cooperation if the role relationship is neither salient nor attractive.

Third, consumers who are influenced to cooperate through compliance will enact cooperative behavior only as long as sanctions exist and as long as others are present. Therefore, providers may want to utilize compliance tactics to gain short-term cooperation when appearance is critical; however, threats of negative sanctions will not be effective in developing long-term, unobservable cooperation.

Finally, the theoretical framework presented here offers a contribution to researchers. Influence processes offer a typology which can be utilized to develop hypotheses for empirical research. This approach allows comparisons across industries as well as between categories of service behavior desired by an individual firm. By treating cooperative behavior as a situationally-determined consumer behavior variable, researchers can investigate conditions under which such behavior is likely to occur. At the same time, such research will have managerial relevance, because managers can modify the marketing mix and, in some cases, the service encounter, in order to increase the likelihood of obtaining the desired cooperative behavior.

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"HE SAYS NO, BUT DOES HE REALLY MEAN IT?":
BARGAINING BEHAVIOR, CUE CONSISTENCY, AND ATTRIBUTION

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Abstract

A number of authors have recommended that attribution theory be applied to studying bargaining. One promising avenue is to study the nature and amount of information that is extracted from observing the opponent's emerging patterns of behavior across time and perceptual modalities. In this paper the effects of these cue patterns on impression formation, attribution, and bargaining behavior are explored. The concept of cue consistency is introduced and applied to the reconciliation of reciprocity and aspiration-level perspectives on bargaining behavior.

Introduction

Attribution theories have frequently been proposed as a rich conceptual framework which could be fruitfully applied to bargaining research (e.g., Chertkoff and Esser 1976; Schurr and Ozanne 1985). Despite the relevance of attributional processes to an understanding of bargaining behavior, scholars have not followed up this speculation with the rigorous program of research that is clearly merited. The purposes of this paper are: (1) to describe an attributional framework useful for guiding future research into attributional processes in bargaining, (2) to demonstrate the power and relevance of attribution theory in bargaining research by proposing an attributional explanation for some fundamental, unresolved bargaining issues, and, (3) to emphasize the signalling power of cue consistency across time and modality in bargaining.

Attribution Triggers

Since some scholars (e.g., Manis 1977) have questioned the prevalence and importance of attributional processing in human behavior in general, it seems necessary to examine the conditions under which attributions are likely to be made in bargaining. Four factors have been shown to be potential instigators of attributional processing: (1) explicit causal questions, (2) outcome dependency, (3) task failure, and (4) unexpected events (Hastie 1984). While demonstrations of the potency of these factors to stimulate inference-making have been made in contexts other than bargaining, the extrapolation of these findings to bargaining behavior seems straightforward.

The achievement literature (e.g., Diener and Dweck 1978; Wong and Weiner 1981) provides substantial evidence that task failure can stimulate causal reasoning. In a bargaining context, perceptions of failure in previous negotiations and the failure of the other party to accept the latest offer in the current negotiation may lead a bargainer to seek explanations for that lack of success and result in more frequent or more thorough inferential processes during subsequent negotiations. Explicit causal questions also stimulate inference-making (Enzle and Schopflocher 1978). It is likely that direct attributional questions asked of subjects before or after bargaining experiments may lead bargainers to make attributions which might not otherwise have been made spontaneously. This phenomenon makes it difficult to measure attributions independent of the research context.

Several experiments (e.g., Eagly et al. 1978; Pyszczynski and Greenberg 1981; Wong and Weiner 1981) in the attribution literature support the prediction that unexpected events promote attributional processing, particularly when the disconfirmed expectancy has negative consequences for the perceiver. In a negotiation, inference-making may be stimulated by bargaining behavior that deviates markedly

from the perceiver's experience, that seems contrary to the actor's interests, that is inconsistent with the actor's prior behavior, or that violates norms of acceptable bargaining behavior. For example, consider a situation where a bargainer has been consistently soft or cooperative in his or her bargaining stance but suddenly deviates from this pattern by ceasing to make concessions and by expressing an inability to make further concessions. Faced with such a dramatic shift in behavior, the perceiver is motivated to begin an attributional search for a plausible cause. Another case of disconfirmed expectancy occurs when a cooperatively oriented bargainer makes a meaningful concession, fully expecting a concession in return, but is rebuffed and is left to wonder why the reciprocity norm was violated. Should the unexpected failure to cooperate be attributed to external situational constraints such as a lack of authority to make further concessions or to internal, dispositional factors such as greed? The perceiver's response may depend strongly on the type of attribution made to account for such distinctive behavior.

Heider (1958) proposed that people are motivated to conduct causal analysis because of a drive to establish cognitive mastery over their environment. Similarly, the attribution stimulating properties of outcome dependency may be derived from a drive for control. In order to gain some degree of perceived control or mastery over the distribution of rewards in the negotiation, bargainers are motivated to seek as much information as possible about environmental factors likely to influence bargaining outcomes. Thus, mutual dependency should be a powerful attribution triggering factor in a bargaining context. Berschied et al. (1976) demonstrated in a non-bargaining context that the degree of motivation to perform causal analysis of an actor's behavior varied directly with the actor's ability to control the rewards and punishments available to the perceiver.

All four attribution stimulating factors described above seem likely to operate in a bargaining context. However, little research has examined the relative importance of these factors and other triggers. It is important to understand the conditions under which attributions are likely to be made in bargaining for two reasons. First, this knowledge would contribute directly to our understanding of bargaining behavior and would allow a judgment to be made as to the relative importance of attributions as determinants of bargaining behavior. Obviously, if attributional processing does not occur spontaneously in bargaining, then the attribution-behavior link can not be a strong one. Second, an understanding of the factors capable of stimulating inference-making in bargaining might improve bargaining skills by suggesting tactics that would tend to elicit certain types of attributions and impressions favorable to the tactician.

Attributional Search and Inference Making

Once the bargainer recognizes an attributional problem, the process of deriving a plausible explanation for the observed behavior is set into motion. The first step in this process is a search for attributionally relevant information. This information might be internal (i.e., in memory) or external to the inference maker. However, due to the strategic nature of bargaining, information obtained through explicit communication with the other party may not be accurate. Bargainers not only manage their explicit communications, but they frequently attempt to control the impression derived from implicit cues such as the pattern

of concessions as well (Brucks and Schurr 1984). Thus, bargaining communications serve a dual purpose: one informational, the other manipulative.

Much of the mainstream attribution research (e.g., McArthur 1972) has focused on the extent to which people acquire and utilize distinctiveness, consistency, and consensus information (Kelley 1967) as part of the process of making attributions. Clearly, one or more of these types of information are usually unavailable in a negotiation, particularly when bargainers are interacting for the first time. Yet even in circumstances of incomplete information, attributions may be quickly and confidently made. Kelley (1967) recognized this problem of incomplete information and suggested that some types of information relevant to causal analysis may be inferred. For example, it may not be necessary for an attributor to seek the consensus of others about the cause of an observed behavior. Rather, the attributor may be able to tap a wealth of consensus information based on experience or social norms which is held in memory.

Kelley's causal schemata were proposed, in part, as another solution to this problem of one-time interactions and limited information (Kelley 1972). One which might be applied in a bargaining setting is the multiple sufficient cause schema (MSC). When a bargainer is confronted by tough behavior from the other party, sufficient causes for that behavior might include greed, aggressiveness, constituent pressure, economic restrictions, use of a negotiating ploy, etc. Kelley's discounting principle suggests that under such circumstances the role of any one of these factors as a potential cause of the observed behavior is discounted due to the presence of other plausible causes. The attributor then becomes mired in a problem of trying to assess the plausibility of various competing explanations. It is exactly this sticky problem which must be solved if an attribution theory is to prove useful as a predictor of bargaining behavior. A potential solution to this problem of relative plausibility appears to have been overlooked in earlier theoretical work, even though the raw material for the solution may be found in Kelley's early attribution work (Kelley 1967). While distinctiveness and consensus information may often be absent in a bargaining context, several different types of consistency information are available in the form of the pattern of stimulus cues provided to one party by the behavior of the other.

Cue Consistency

Kelley's attribution model recognizes consistency in behavior over time and across modalities. Kelley has described the latter form of consistency as referring to different perceptual modes or sensory modalities of interaction with the actor (Kelley 1973). We believe that the concept of consistency over perceptual modality is very important in bargaining. Cue inconsistencies across time or modality undermine a bargaining position; hence, highly consistent cues in bargaining may be interpreted as much more credible information. Many different types of cues are typically available in a negotiation: facial expressions, body language, explicit written and verbal communications, the size and frequency of concessions, the deliberation time between bids, etc. Perhaps the most important type of implicit information available in a negotiation is provided by cue patterns rather than the individual cues. When multiple cues are present in an interaction (and it is hard to imagine a setting in which more than one cue would not be available in a bargaining context), several types of information are extractable from the pattern of their inter-relationships or correspondence with one another.

One important aspect of consistency in bargaining is the extent to which a cue is consistent over time. In other words, is there a discernable pattern to the behavior across bids in the negotiation? This type of consistency could be called "temporal consistency" (Kelley 1967). A cue, such as a pattern of concessions may be directional or non-directional, and still be temporally consistent. For

example, a negatively accelerated (i.e., large to small) pattern of concessions is directional and temporally consistent in that the soft-to-tough direction is consistently signalled over time. On the other hand, a bargainer who concedes the same amount on each bid is also exhibiting behavior which is temporally consistent; however, the pattern is non-directional.

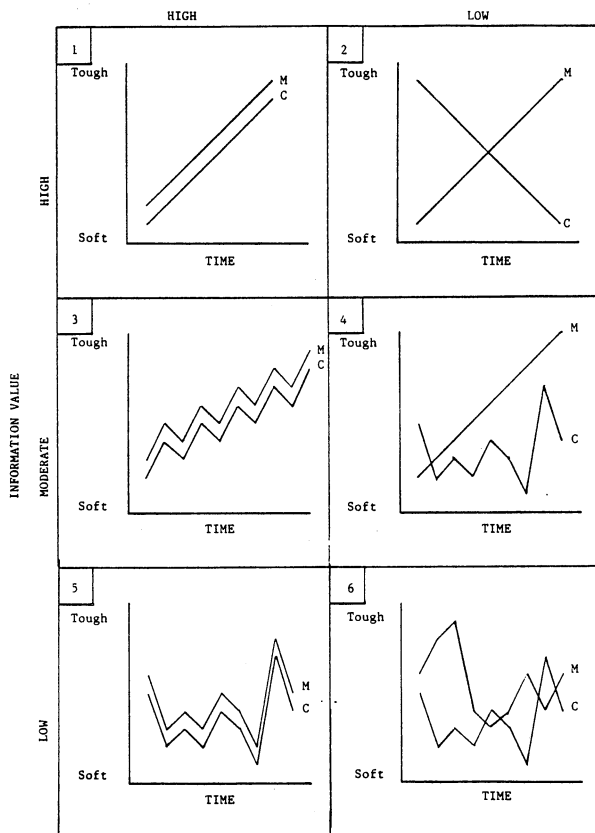
Directionality can be thought of as increasing the information value of a cue. Conceding a constant amount may lead a bargainer's partner to be quite confident about the size of her/his next concession, but such a pattern provides little information about the bargainer's motives, intentions, or the likelihood that another concession will be made on the next bid. Non-linear, negatively accelerating concession patterns clearly signal a point beyond which the bargainer is unable or unwilling to concede. Positively accelerated concession patterns signal an increasing willingness to cooperate. In all of the cases it is up to the observer to make an attribution about the reasons for the bargainer's concession-making behavior.

The nature of that attribution and the confidence with which it is made depends in part on the information value of each cue and the nature of the relationship between the concession cue and other cues available in the interaction. Thus, the second aspect of consistency concerns the relationships among the behavioral cues. Two types of inter-cue consistency are identifiable: (1) the consistency between cues during any one point in time (i.e., during any bid) which we will call "point consistency" and (2) the consistency between the patterns formed by the cues which we will call "directional consistency".

Understanding the information value and the degree of consistency among behavior patterns likely to be available in a typical negotiation is a very difficult and complex task. Even simplified two-cue settings prove to be much more complex than one might imagine at first glance. However, by classifying a bargainer's behavior as either high or low in terms of consistency and either high, moderate, or low in terms of information value, it is possible to identify six (2x3) different types of relationships between two bargaining cues. Figure 1 shows the six different ways in which two bargaining cues may be classified along the information value and consistency dimensions. Cell 1 contains cues which are highly consistent with each other and which provide maximal information about the actor. The cues are highly consistent because each cue moves from soft to tough from one bid to the next and the direction of change is the same through-out the negotiation. The information value is high because both cues are patterned, signalling a consistent soft-to-tough direction over time. In Cell 2 the cue patterns are inconsistent or conflicting in that one cue moves from soft-to-tough while the other changes from tough-to-soft across bids. However, the information value is still high because both cues are patterned and directional. It is only the nature of the information conveyed by each cue that is inconsistent.

In Cell 3, cross-cue consistency is high because the toughness of the concessions and messages moves together from one bid to the next (i.e., the toughness of the concession cue and toughness of the message cue are highly correlated). The information value of the cues is only moderate, however. Even though a soft-to-tough trend or direction is observable over time for each cue, the temporal consistency of the bargainer's behavior is lower than in Cell 1. Cell 4 is an interesting case where the cue patterns provide some information because one is directional. However, the consistency is low because the other cue is not directional. Again, the information value suffers because only one of the cues signals a consistent direction to the behavior over time.

FIGURE 1
 SIX TYPES OF CUE RELATIONSHIPS BASED ON RELATIVE INFORMATION VALUE AND
 CONSISTENCY. TWO CUES ARE DEPICTED: A MESSAGE PATTERN (M) AND
 A CONCESSION PATTERN (C)



In Cell 5 the cues are highly consistent in terms of toughness during any bid (i.e., point consistency is high), but are also not directional. The lack of direction lowers their information value. Finally, Cell 6 depicts cue patterns which are truly random. The correlation between concession toughness and message toughness over time is essentially zero. There are no directional patterns, so the information conveyed is minimal.

If at least one cue provides information that is inconsistent with the other available cues, the credibility of the bargainer will be damaged. For example, if a bargainer is inconsistent in her verbal communications, sometimes tough and other times soft, the degree of consistency between the message behavior and any particular concession will be high when the concession is small (large) and the message is tough (conciliatory) and low when the concession is large (small) and the message is tough (conciliatory).

This consistency information may be used to overcome the plausibility dilemma described earlier. The information value and the directional consistency of the cues determines the most plausible cause for the observed behavior. In other words, the most plausible cause for an observed behavior is the one which is most consistently signalled by the cues available in the interaction. If information related to temporal or directional consistency is not available for any reason, the degree of cue consistency during the one period of interaction (i.e., point consistency) may be sufficient to allow an ordering of potential causes in terms of plausibility.

Before proceeding, it might be helpful to reconsider our earlier example of causal analysis in bargaining. Consider again the situation in which a buyer is attempting to determine the cause of a seller's tough negotiating

behavior. The seller claims to have a high break-even point as justification for an inability to concede beyond a certain point. The buyer realizes that the seller could be telling the truth about the external constraints on his/her behavior. However, the buyer also recognizes several other plausible causes for the seller's behavior such as greed, agreeableness, the need to dominate, etc. In this setting, Kelley's multiple sufficient cause schema would appear to be appropriate. However, how is the buyer to evaluate the relative plausibility of these competing explanations for the seller's behavior?

The concept of cue consistency provides a differentiating mechanism in such a situation. Let us suppose that the seller's concessions have been decreasing in size over time in a non-linear manner, thereby signalling an asymptotic settlement price. In addition, the seller has been taking an increasingly long time to respond to the buyer's counter-offers while becoming more and more agitated and strident in his communications concerning the likelihood of conceding further. The observer perceives a high degree of temporal, point, and directional consistency. The strong cue consistency may make the external attribution (high break-even point) relatively more plausible than it would be otherwise, and increase the buyer's confidence in attributing the seller's behavior to economic constraints.

It is important to recognize that, just as there are several types of consistency information, a lack of consistency among the cues can take different forms as well. The effects of these types of inconsistency on attributional processing differ. Consider a situation where, instead of a non-linear, decreasing concession pattern, the seller has been making increasingly larger concessions over bids in the negotiation. This concession pattern is temporally consistent; however, such a pattern does not correspond with the soft-to-tough message and deliberation time patterns available. In this case, the low directional consistency should greatly weaken the external attribution being considered by the buyer. Similarly, if the seller's concession behavior did not exhibit a pattern at all (i.e., had been apparently random), directional consistency would still be damaged and the external attribution weakened.

This theory of attributional processing recognizes the complex interrelationships among the cues provided in a negotiation. The rich information value of the interaction of these behavioral cues provides a potential solution to the problem of multiple sufficient causes for a target bargaining behavior. From a cue consistency perspective, the patterns observable in bargaining behavior are more important to attributional processes than individual cues. A prediction that high levels of cue consistency can increase the plausibility of a factor as a potential explanation for an observed behavior is, in effect, a prediction that impression management can be used to outwit naive attributional processing in many human interactions. This should not be a surprising finding. Attempts to manipulate and manage impressions are part of the reality and richness of bargaining.

The Attribution-Behavior Link

There exists a long-standing difference of opinion in bargaining research as to the basic nature of the cue-response relationship in bargaining (Smith et al. 1982). One school of thought, sees bargainers as primarily guided by a social norm of reciprocity (Smith et al. 1982). From this perspective, bargainers are likely to respond to tough bargaining behavior with correspondingly tough behavior of their own. When one party makes a concession, the other party is expected to reciprocate. Thus, if this hypothesis is valid, an examination of behavior in a negotiation should reveal a pattern of matched behaviors.

The aspiration level hypothesis posits that bargainers tend to adjust their initial expectations or aspiration levels in response to their bargaining partner's behavior (Siegel and Fouraker 1960). According to this explanation, a bargainer's aspirations and behavior are mismatched with

the other bargainer's behavior. In other words, a bargainer will tend to lower his aspirations, make greater concessions, and settle at a less favorable outcome when the other adopts a tough bargaining stance. These responses are probably driven by attributional processes through which tough stances are attributed to a strong bargaining position and soft stances are attributed to weakness. When the opponent adopts a soft bargaining stance, a bargainer will respond by raising his aspirations and becoming more competitive. This is exactly the opposite of the prediction made by the reciprocity hypothesis.

Several studies indicate that Siegel and Fouraker's (1960) level-of-aspiration hypothesis is a better model of bargaining behavior (e.g., Siegel and Fouraker 1960; Yukl 1974a,b; Bateman 1980). On the other hand, an equally impressive number of studies have provided support for the reciprocity explanation (e.g., Benton et al. 1972; Esser and Komorita 1975). The dependent variables of interest in these studies include initial offer, concession size, concession frequency, the percentage of concessions which are reciprocated, settlement-price goal (aspiration level), and final settlement price. Predictions based on the competing theories of bargaining behavior are tested by observing the ways in which subjects respond to various programmed bargaining strategies. Unfortunately, space limitations prevent a detailed review of this literature. One important observation drawn from this literature is that bargainers sometimes behave in a manner consistent with an aspiration level perspective, and at other times, reciprocity seems to be operating. In fact, support for the two competing explanations for bargaining behavior often varies within an experiment depending on the type of measure considered (e.g. Yukl 1974a). How can this conflict be resolved? One approach to reconciling the contradictory evidence has been to attempt to identify the conditions under which either reciprocity or aspiration-level types of behavior are likely to be observed. Unfortunately, this stream of research has also produced equivocal results (Smith et al. 1982).

What is needed is a more sophisticated theory which does not necessarily make either-or, dichotomous predictions of when behaviors consistent with an adjustment of aspiration levels or behaviors consistent with the application of a norm of reciprocity will be observed. Both types of behaviors are clearly possible (even probable) during a negotiation. The position taken in this paper is that the relationships among cues and responses in bargaining are, at least in part, mediated by attributional processes occurring in the minds of both parties in a bargaining dyad. Whether a bargainer responds to toughness with toughness or concessionary behavior, depends on the nature and the strength of the attributions made to account for the other party's behavior.

Let us consider a simple, hypothetical bargaining example in which a seller is motivated to conduct a causal analysis of a buyer's behavior. The only cues that are available are the initial offer and the pattern of concessions. This is somewhat analogous to a real estate negotiation in which the bargaining parties never meet. Suppose the buyer has made a very low initial offer which was followed by a concession pattern characterized by relatively large initial concessions. The low initial offer seems tough, yet the buyer proceeds to concede generously. How is this behavior to be interpreted? Even this simple example requires some rather complex causal analyses which can be made only with full consideration of the context. If the seller's own concessions have been minimal, the buyer's behavior might be attributed to a weak bargaining position (i.e. buyer's wife must have the house, and this need is increasing; or the house is very attractively priced compared to alternatives), to a lack of bargaining expertise, or to a desire to cooperate with the seller. In this situation, if the seller attributes the buyer's behavior to a weak position or to ignorance, mismatching is likely to result as the seller hardens her own position to exploit the perceived weakness. On the other hand, if a cooperative disposition is attributed to the buyer, the seller may reciprocate with concessions of her own.

Now suppose that, as the negotiation proceeds, the seller notices that the buyer's concessions have been decreasing in size at an increasing rate. In fact, the concessions seem to be approaching a settlement price asymptotically. Now that a pattern is observable, the seller's causal analysis of the buyer's behavior may change to incorporate the new information. The plausible cause of the buyer's behavior now becomes a clearly signalled settlement price beyond which the buyer may be unwilling or unable to concede. In this case, assuming the signalled price is within the range of outcomes acceptable to the seller, the seller's behavior is likely to be mismatched with the buyer's as she concedes to the signalled price. If the signalled price is not in the acceptable range of outcomes, or if the seller feels manipulated, the seller may adopt a concession agenda that signals an alternative minimum settlement price. This is an example of matching behavior or imitation at the level of bargaining strategy (Pruitt 1981). The key point that should be emphasized here is that an effect of attribution on response is likely to be observed regardless of the type of attribution made to account for the other's behavior. For managed signalling or impressions to have an effect, it is not necessary for the observer to be gullible and willing to accept the information provided by the other's behavior at face value. Even if the behavior patterns are attributed to the use of a manipulative bargaining ploy or strategy, the observer's subsequent behavior is likely to be strongly affected by that inference.

The example used above is a simple one and assumes that the bargainer is aware of the behavior patterns of the other party. However, it does provide a demonstration of the capacity of an attribution-based explanation to reconcile the confusing and contradictory findings of earlier bargaining research. Of course, this is not to suggest that attributions are the only determinants of behavior in bargaining. Rather, it seems likely that many situational variables such as the relative availability of information, power differences, and individual difference variables such as interpersonal orientation affect the extent to which attributions guide bargaining behavior and even whether attributions are made at all.

Implications for Consumer Research

Formal negotiations, in which a buyer and seller exchange a series of offers over an extended period of time, occur rather infrequently in both consumer and industrial markets. However, the importance of cue consistency to attributional processing and impression formation is not limited to formally negotiated exchanges. In any type of dyadic interaction in which a consumer forms an impression about the credibility of a salesperson or solicitor for a non-profit organization, the relationships among the behavioral cues provided by the salesperson or solicitor contribute to the formation of the impression. Even brief encounters provide consistency information which may be used to support or undermine attributions about the actor.

Consider a situation in which Joel, a consumer, enters an electronics store to shop for a compact disc player. The salesperson recommends a particular brand of compact disc player, claiming it to be superior in quality and sophisticated technology, albeit considerably more expensive than some competing models. The salesperson is professional in appearance. She speaks with confidence about the product's features and looks into the customer's eyes when making the recommendation. The product itself is attractive and seems to perform well in listening tests. Joel is not sufficiently well-informed about the relative quality of competing brands to make an independent judgment as to which one is better for him. Under these circumstances, Joel's thoughts might go something like this. "The salesperson could be telling me the truth. I know that Brand X makes reliable video cassette recorders. Maybe their audio disc players are well made too. On the other hand, the salesperson's commission could be higher on this machine. She does seem to be an honest person though and very knowledgeable about the product. I guess I'll take

it." Joel's impression of the salesperson contributed significantly to his decision to accept the recommendation and buy the product. The key attribution was the salesperson's motive for suggesting Brand X. Several pieces of information were available for causal analysis, and all were consistent with the inference that the salesperson's behavior was caused by a genuine belief in the superiority of the recommended brand. Had the salesperson appeared evasive about the product or had some aspect of the product itself appeared shoddy, the attribution of truthfulness to the seller would have been weakened and the probability of purchase lowered.

In more formal negotiating settings such as media negotiations, real estate negotiations, or long-term purchase contract negotiations in industrial markets, cue consistency can be an important part of bargaining strategy. For example, if a seller is trying to justify tough bargaining behavior, it is important that such behavior be attributed to economic constraints rather than greed or aggressiveness. In other words, the seller wants the buyer to attribute the tough behavior to some external cause and/or one that is outside the seller's control. Otherwise, an attribution of greed or aggressiveness to the seller might result in a hardening of the buyer's position. The external attribution will be strengthened to the extent that the seller's other behavioral signals are consistent with such an explanation.

Summary

In this paper, four important parts of the attributional process were identified as particularly worthy of future research: (1) the identification of factors likely to instigate attributional processes, (2) the nature of attributional search and cue utilization, (3) the process by which available information is used to compute attributions, and (4) the nature and strength of the link between attributional processing and subsequent bargaining behaviors. Cue consistency theory was extended and introduced as a potential explanation for the way bargainers resolve the dilemma of choosing among several plausible causes for the other party's behavior. Finally, an example was provided to demonstrate the potential ability of an attributional perspective to reconcile a long-standing difference of opinion in bargaining research. While a vast body of potentially relevant attribution research exists in social psychology and allied fields, consumer researchers interested in buyer-seller negotiations have not followed up on their speculations concerning the crucial role played by attributional processing in bargaining. The authors are currently involved in a long-term program of research designed to provide some preliminary information concerning the nature and importance of bargaining attributions.

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THE ROLE OF PRIOR PRODUCT EXPERIENCE
IN ORGANIZATIONAL BUYING BEHAVIOR

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Abstract

The current research examines some of the variables typically measured by organizational buying behavior researchers (e.g., attribute importance, number of potential vendors) and shows how one information processing variable, experience, relates to these measured variables. While all outcomes were not statistically significant, the results tend to support the enrichment hypothesis frequently examined by consumer behavior researchers. The more experienced buyer tended to have a larger evoked set, have a larger number of vendors in the final consideration set, possess a larger number of selection criteria, and better discriminate among potential suppliers.

Introduction

The role of prior experience (e.g., product knowledge, product familiarity) in information processing has become a major topic of investigation in the cognitive sciences (Chi, Glaser and Rees 1981; Larkin et al. 1980), and in recent years has received increased attention from consumer researchers. Prior experience, or more generally, some type of feedback mechanism from purchase experiences, has been included in traditional models of consumer behavior (cf. Bettman 1979; Hansen 1972; Howard 1977; Howard and Sheth 1969). More recently, several experimental studies have examined the relationship between prior experience and consumer choice processes (e.g., Sujan 1985; Beattie 1981; Johnson and Russo 1981, 1984). In these studies differences in "experts" and "novices" information processing strategies have been observed.

Interestingly, however, the research on prior experience has not been as pervasive in the area of organizational buying even though effects of experience, if observed in this context, could be extremely important to organizational sellers. Organizational researchers have distinguished among the different types of buying decisions, such as new task, modified rebuy, and straight rebuy (Robinson, Faris, and Wind 1967; Lehmann and O'Shaughnessy 1974) relating the newness of the problem to the organization with information requirements and to the consideration of alternative sources of supply. However, these researchers have not examined differences in information processing strategies based upon the individual's experience in purchasing the product (regardless of the particular type purchase for the organization).

The research reported here seeks to contribute to our knowledge of organizational buying processes by examining the relationship between the prior purchase experience of organizational buyers and several information processing variables typically measured by organizational buying behavior researchers (cf. Moriarty and Galper 1978; Moriarty and Spekman 1984). In addition, it also contributes to the general literature on the effects of prior experience. It may be easier to study and detect differences due to prior knowledge or experience in organizational purchasing decisions because they often involve more complex products that require more information processing in general, and because they often take place over a longer period of time than consumer decisions (cf. Ames and Hlavacek 1984; Cyert, Simon and Trow 1956). Experience here may be more of an advantage than in consumer settings.

Role of Prior Experience in Information Processing

Two views of how prior knowledge affects information processing have been put forward in the consumer behavior

literature. In the first, it is hypothesized that consumers highly familiar with a product will engage in less search for information than consumers unfamiliar with the product. Highly familiar consumers are more likely to know specific facts about existing alternatives, and therefore would not need to gather additional information. Paradoxically, according to this "inverted-U" hypothesis, consumers very unfamiliar with the product would also engage in little search. For them, however, more than a little search is too difficult and cognitively taxing. Consumers who know a moderate amount about the product would engage in the most search because they have the ability to handle the incoming information and have a motivation to acquire more.

Bettman and Park (1980), for example, used the inverted-U hypothesis to interpret findings regarding the effects of experience on the types of information processed (e.g., prior information and attribute evaluations) and the processing heuristics used (e.g., processing by attribute or by brand, comparisons to standards). In this research, the moderate experience group did more processing of currently available information and relied less on prior knowledge than did the high and low experience groups. Similarly, Johnson and Russo (1981, 1984) found that moderately experienced subjects asked to make a product choice recalled more statements about the product than subjects with either high or low experience, perhaps indicating greater attention to, or use of, information.

According to a second hypothesis, however, knowledge about a particular product facilitates learning new information. Highly familiar consumers should be able to encode information about additional alternatives more efficiently and thus may tend to gather more information than consumers not familiar with the product.

Support for this "enrichment" hypothesis that existing knowledge facilitates learning new information has also been found. In a complex usage situation, Brucks (1984) found that knowledge increased search efficiency by allowing faster recognition of poor or inappropriate alternatives and facilitated the asking of questions about attributes of the alternatives. And, Johnson and Russo (1984) report a linear effect in the levels of recall as a function of prior experience when subjects were asked to form a judgment about each product.

Despite the as yet unresolved differences between these two views, the research into the impact of prior experience on decision-making behavior has helped produce a better understanding of the nature of consumer buying behavior. In organizational buying behavior contexts, however, little attention has been paid to variables affecting the processing of information by members of the buying center, with the exception of studies on the sources of information used (Moriarty and Spekman 1984; Sheth 1973; Kelly and Hensel 1973; Ozanne and Churchill 1968), and information as a means of risk reduction (Webster and Wind 1972). Thus, the current study borrows heavily from the research on consumers in order to investigate the effects of prior purchasing experience on information-processing strategies employed by organizational buyers. An implicit assumption, then, is that organizational buyers will be subject to the same cognitive limitations and strategies as end use consumers.

Hypotheses

Hypotheses regarding the effects of experience on industrial/organizational buyers were derived from the theory

and research on this topic in consumer behavior. Specifically, the inverted-U and the enrichment hypotheses formed the basis for predictions regarding four dependent variables:

1. More experienced buyers will include more alternate vendors in their evoked set, i.e., the set that first came to mind when they were initially faced with the decision, than less experienced buyers.
2. More experienced buyers will include a smaller number of vendors in their final consideration set than less experienced buyers.
3. More experienced buyers will consider a larger number of attributes when making a purchase decision than will less experienced buyers.
4. More experienced buyers will perceive greater differences between alternatives than less experienced buyers.

As in previous consumer studies, prior experience in making these kinds of purchase decisions should result in a greater awareness of, and knowledge about, alternatives. This greater knowledge base will be reflected in the number of alternatives that initially come to mind when facing a purchase decision, in the number of attributes perceived to be important, and the distinctions made between alternatives on those attributes. On the other hand greater knowledge or experience should make it easier to recognize and disregard inappropriate alternatives. Thus, more experienced buyers may ultimately consider only a few alternative vendors. Less experienced buyers' final consideration sets may be larger because they are less able to evaluate and disregard inappropriate alternatives they become aware of in their decision process.

Method

Data was collected from decision-making units (DMUs) in approximately 300 organizations that had made major procurements of nonintelligent data terminals within the previous 24 months. These organizations represented a stratified random sample of Dun & Bradstreet companies including five industry sectors (manufacturing, business services, transportation, finance, and wholesaling/retailing) and three size classifications (100 to 249 employees, 250 to 1,000 employees, and more than 1,000 employees). For purposes of the larger study of which this was a part, a telephone snowballing technique was used to identify all participants in the decision to buy the terminals. Questionnaires were sent to all decision participants who agreed to cooperate with the study.

Analysis for the current study is based on the responses of 455 individuals involved in the buying process for 319 organizations. To be included, a respondent must have reported that he/she played at least a somewhat important role in the search process, the vendor and product evaluation process, and the vendor selection process. For example, an individual who was very involved in the initial vendor search process but not involved in the final selection of vendors was not included. Thus, our sample consists of individuals who were involved in the entire process, and not just a part of it.¹

Independent Variable

The independent variable in this study was the amount of prior experience the individual had in making major data terminal procurement decisions. Past experience with the product per se was not of interest, but rather the cognitive structures that were presumably caused by having been

previously involved in purchasing data terminals defined the product-related experience. Of concern were the number of major data terminal system procurement decisions the individual had participated in during his/her career (not just in the current firm). As such, years of employment, years of experience in the company, length of time in a position, or position title were not reliable measures of prior experience. In addition, since participation in such a major purchase as data terminals is generally not considered to be an everyday occurrence, it was felt that the individual respondents would be able to accurately recall prior participation.

Three experience groups were created: the low prior experience group individuals reported participation in one or no previous decisions; moderate prior experience subjects had participated in two or three previous decisions; high prior experience group members had participated in four or more decisions. Three groups are the minimum needed to detect any curvilinear relationship between experience and the dependent variables and the maximum allowed by the variability in the experience measure in this sample.

Finally, an analysis was conducted to determine whether experience, as measured in this study, was related to or confounded with the position of the respondent in his/her company. A one-way analysis of variance showed no significant differences in experience as a function of position in the company.

Dependent Measures

Four dependent measures were examined separately: the number of vendors respondents reported to be in their initial evoked sets, the number of vendors he/she reported as being in the final consideration set, the importance ratings for 33 product and vendor attributes, and ratings of the degree of difference between vendors on the same attributes. For the first of these, respondents merely were asked how many possible suppliers came to mind when they first became aware of the company's needs. For the second measure, respondents were asked how many vendors there were during the final stages of selection. Ratings on 6-point Likert scales for 33 attributes formed the last two measures. For each attribute, the respondent rated its importance and the degree of difference among suppliers in the industry on that attribute.

Results and Discussion

Separate analyses of variance were used to test each hypothesis. The independent variable in each instance was the respondent's experience (low, moderate, high). When significant overall differences were found, Spjøtvoll-Stoline tests (Kirk 1982) for paired comparisons were conducted to determine the location of the difference.

Number in the Evoked Set

The first hypothesis proposed that the more experienced industrial buyer would include a greater number of alternative vendors in his/her evoked set when faced with a purchasing decision. The analysis of variance revealed a significant effect of expertise ($F = 11.043, p < .05$). As shown in Table 1, the more inexperienced the purchaser, the smaller the size of the evoked set. Pairwise comparisons revealed significant differences between the low and high groups and between the moderate and high groups ($\alpha = .05$). The difference between the low and moderate groups was not significant. However, the absolute value of the difference between these means was .82 while the critical difference that the pairwise comparison had to exceed to be declared significant was .83.

The results of this analysis demonstrate the potential influence that prior knowledge exerts on organizational buying behavior. It is not surprising that the more experienced buyer could call to mind more potential vendors when he/she first becomes aware of the company's needs. The person who has had more experience with vendors and

¹Other analyses were conducted with more stringent definitions (of both experience and role) to test the sensitivity of the results to sample definition changes. While the statistical results varied slightly due to different inclusion rules, the direction of the mean responses were consistent throughout.

has gone through the search process a few times is probably more aware of the vendors who offer the needed equipment.

TABLE 1
INFORMATION VARIABLES BY THE AMOUNT
OF EXPERIENCE THE BUYER POSSESSES

MEASURE	EXPERIENCE		
	LOW	MEDIUM	HIGH
Size of Evoked Set	3.41	4.23	5.09
Size of Final Consideration Set	2.40	4.79	8.27
Number of Important Attributes	17.98	18.65	19.44
Perceived Difference Among Alternatives	3.93	4.03	4.19
Size of the Final Consideration Set			

As suggested by the second hypothesis, it seems likely that the more experienced purchaser would be able to quickly eliminate inappropriate vendors and would consider seriously only a small number of vendors when making the final decision. The inexperienced purchaser may have a difficult time eliminating vendors due to a lack of prior knowledge pertaining to equipment or services offered and would tend to obtain the needed information from several vendors.

Contrary to our expectations, the more experienced purchaser had a much larger number of potential vendors in the final consideration set. While the overall hypothesis of equality of means could not be rejected ($F = 1.755$), the average size of the final consideration set became larger with increased experience (see Table 1). In fact, the experienced buyers included a larger number of alternatives in their final consideration set than in their initial evoked set, while the opposite was true for the inexperienced buyers.

These results are consistent with the "enrichment" hypothesis--greater prior knowledge facilitated the collection of more knowledge. The purchase of nonintelligent data terminals might be considered a complex usage situation, and these results would lend support to findings that knowledge increased search efficiency (Brucks 1984). The more inexperienced buyers may know so little about product attributes and about different companies that they have difficulty evaluating alternative suppliers.

Our results in this particular context also suggest that risk may be an important element in the buyer's task environment. An inexperienced buyer may perceive the purchase decision as riskier than an experienced buyer, and thus may narrow his/her search to only a few well-known suppliers. In the context studied here, inexperienced buyers may have relied more on IBM, and felt less able to evaluate other, perhaps riskier choices. Thus, future research will be needed to determine if these differences between experienced and inexperienced buyers persist when there is less risk, or when there is not a dominant supplier.

Number of Important Attributes

Buyers familiar with the particular product class were expected to use more evaluative criteria in making a product choice (Beattie 1981; Scrull 1983). While the more experienced buyers in the current study considered a greater number of attributes to be important than did the other groups (Table 1), the overall analysis of variance was not significant ($F = 1.803$).

The list of product attributes was based on initial research on the data terminal industry and on a review of several private studies conducted within the data terminal industry. For all but five attributes, over 60 percent of the respondents rated the attributes 4, 5, or 6 on the im-

portance scale of 1 (unimportant) to 6 (very important). For example, 99.1 percent of the respondents replied that the "reliability of the product" was important (i.e., a 4, 5, or 6 on the measurement scale). Unfortunately, the list of attributes may have been skewed too much towards obviously important things, and respondents were not forced to prioritize them or make any kind of trade-offs among them. Thus, the lack of significant effects on attribute importance may be due to too little variability in the dependent measure, or to the fact that many attributes are important in organizational buying situations but few are deterministic.

One review of organizational buying behavior has suggested that experienced purchasers emphasize price more than inexperienced purchasers (DeBruicker and Summe 1985). In the current study, the five attributes receiving the lowest importance ratings were: lowest price, vendor's willingness to negotiate price, vendor offers large volume discounts, vendor visibility among top management people, and the aesthetics of the product (style, design, color, size). Since three of the five attributes receiving low importance ratings dealt in some way with price, future analysis should seek to determine whether there is a difference among buyers with respect to the level of experience and a reduced set of macro-attributes.

Vendor Differences

Consumer research has suggested that inexperienced buyers tend to perceive fewer distinctions among suppliers on product attributes than do the more experienced buyers (cf. Beattie 1981). The fourth hypothesis proposed just such a finding in the industrial arena.

Respondents were asked to indicate their opinion of the degree of difference among suppliers on each of the 33 selection criteria for which they had given importance ratings. The Likert scale ranged from 1 to 6, with 1 indicating that the suppliers were all about the same and 6 signifying a big difference among suppliers. One-way analysis of variance found a marginally significant overall difference between level of experience and differences among suppliers ($F = 2.657$, $p < .10$).

The average difference for the low experience group was 3.93, with the average difference for the moderate and high experience groups being 4.03 and 4.19, respectively. Analysis of the pairwise comparisons revealed that there was a marginally significant difference between the low and high experience groups ($\alpha = .10$). The other pairwise comparisons were not significant. Possible explanations for this could be that it takes quite a few purchase situations for the effect of experience to impact the discriminatory processes of the buyer, or that not much is gained by having additional experience.

Summary

This research was motivated by the work being conducted in consumer behavior which examines the relationship between prior experience and consumer decision making. It was an initial attempt to empirically test consumer behavior theory in an industrial marketing context. Some results supported previous consumer behavior findings, while others did not. However, this is not unusual given the mixed results also reported in the consumer behavior literature.

Specifically, the current research tends to support the enrichment hypothesis frequently examined by consumer behavior researchers. While statistical significance was not always found, the more experienced buyer tended to:

- have a larger evoked set,
- have a larger number of vendors in the final consideration set,
- possess a larger number of selection criteria, and
- better discriminate among potential suppliers.

Previous organizational buyer behavior research has

generally focused upon the information requirements surrounding the type of buying situation. For example, a straight rebuy situation would suggest that only a minimal amount of information was required. Based upon the current research, it now becomes questionable whether a minimal amount of information is required or if the buyer has just become more efficient in the information search process. On the other hand, a new task buying situation, based upon previous organizational behavior literature, would have had a greater information requirement. However it is suggested here that the new task buyer would not have utilized a greater amount of information.

Research concerning the presence or absence of prior experience with a product class has significant implications for the industrial marketer. Specifically, such information is paramount for communications strategy development. Insight into how experience affects the choice process can help in determining the type of information most effective for buyers with differing levels of experience. Sales presentations could easily be geared for the different levels of experience.

While fairly common in industrial marketing, the method of data collection in the current study is extremely different from the laboratory experiments typically conducted in consumer behavior research, and there may be some difficulty in studying information processing with an uncontrolled field study rather than in a controlled experimental context. Studying information processes by way of mailed questionnaires does not allow the experimenter to manipulate variables (e.g., experience) or to monitor the process (e.g., time) that the respondent uses in making decisions. Additionally, presenting the respondents with a list of "relevant" attributes and asking them to rate the degree of importance of each may tend to bias the responses, in that the respondent may not have thought of a particular characteristic but sees it as important now that he/she knows about it. Finally, retrospective reports may not be as accurate for the early as the latter stages of the decision. However, field research has the advantage of tapping actual organizational buyers regarding actual buying decisions.

The current research, of course, leaves many questions regarding the information processing strategies of organizational buyers unanswered. Further studies must replicate and extend this study by including measures of many more processing variables. With a more controlled method, perhaps we might be able to track information search and use more precisely.

Beyond this, the general area of prior knowledge or experience seems to be important for understanding organizational buying behavior. Further research, for example, could examine differences between levels of experience and the macro-attributes (e.g., price) that the buyer uses. Having an idea as to whether the buyer will focus his/her final decision on price, sales competence, service, etc. would assist the industrial marketer in determining which criteria to emphasize in the sales presentation.

Finally, this study examined organizational buyers purchasing nonintelligent data terminals. Future studies could examine organizational buyers at opposite ends of the risk or complexity spectrum (such as office supplies, mainframe computers) to determine whether the level of experience has different effects with different types of products.

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EMERGING CONSUMER MARKETS IN JAPAN

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Abstract

Japan has traditionally been characterized as a homogeneous society (Aaker, Fuse and Reynolds 1982, Christopher 1983, Lazer, Murata and Kosaka 1985, Nakane 1970). Income differentials between the lowest and the highest income groups have tended to be small, and there are relatively minor regional differences. The population is predominantly urban, crowded into a small geographic area. But perhaps most significant, traditional values have emphasized group conformity or hitonami, resulting in concern among Japanese to be perceived like others and to live according to the expectations of those around them (Fields 1983, Hakuholdo Institute of Life and Living 1983).

In recent years, however, a number of changes have been taking place in Japanese society, resulting in the emergence of new values and growing social diversification (Izeki 1986). As income levels have risen, certain sectors of the population have experienced a significant increase in discretionary income. At the same time, as material standards of living have risen, the struggle to keep up with others in terms of material possessions such as a refrigerator, a color TV or a car, has been replaced by a desire to improve the quality of life and a search for self-fulfillment (Kakita 1985). A shift in hitonami consciousness has thus begun to take place, resulting in a deemphasis of traditional values and the emergence of greater individuality and freedom of self expression.

Such changes are, however, primarily manifest in certain areas of daily life such as work, diet, leisure activities and clothing (Hakuhodo Institute of Life and Living 1983, Nakazawa 1985). In relation to work for example, there is a growing emphasis on personal goals and achievement as opposed to company objectives. Similarly, in food consumption and leisure activities there is little concern with what others do and think and hence, here again signs of diversity and individuality are emerging (Nakazawa 1985). But in other areas of life, such as gift giving, formal occasions and social life, hitonami consciousness and concern with social acceptance and approval still remain strong (Aburatani 1985).

Parallel to such developments, a number of new consumer markets have begun to emerge. Two, which have aroused particular attention, are working wives and young single adults. In recent years, an increasing number of married women have moved into the work force, - many seeking part-time employment as a means of supplementing family income. Similarly, the significance of the young adult market has grown as a result of rising birth rates in the late 60s, and the postponement of marriage by both male and female. Both these markets constitute attractive targets for marketers due to their relatively high discretionary income.

Working Wives

The proportion of married women in the labor force has increased dramatically over the past two decades. By 1984, married women accounted for over 60% of the women employed as compared with less than 40% in 1976 (Ministry of Labor 1984). While some of this new source of income is reserved for family expenditures such as mortgage payments, children's education or eating out in family restaurants, many married women

tend to view the money they earn as personal "pin money". It is thus earmarked for items such as cosmetics, stockings, etc. as well as social and leisure activities outside the home such as eating out with friends in coffee shops or participation in culture clubs and centers.

In particular, concern with health and fitness has stimulated increasing interest in sports activities and fitness classes, including tennis, aerobics etc. (Hakuhodo Institute of Life and Living 1984). Furthermore, since many married women lack confidence in their intellectual abilities often they seek to improve themselves through studying and attending classes at the culture centers. Travel and day-trips are another important interest. Here, they often go in groups or accompanied by other female friends. Thus, married women have become a key market not only for traditional household items such as prepared foods, frozen main dishes, take out foods and cleaning services, but also for culture and leisure activities and both domestic and foreign travel.

Young Adults (Singles)

Young singles have also emerged as an important market segment. Not only have they increased in size and purchasing power, but also they have begun to break away from the traditional values of Japanese society and define their own life patterns. Since the vast majority still live with their parents and make little or no contribution to family household expenditures, they tend to have a substantial discretionary income. This is spent primarily on personal items, though interestingly a relatively high proportion goes to savings, predominantly for marriage. Among males, the major expenditure is food and drink, making them prime targets for the restaurant and entertainment markets as well as alcoholic beverages. In the case of women, appearance is a key item resulting in heavy expenditures on cosmetics and toiletries as well as expensive fashion items such as handbags and fur coats, etc.

Leisure activities are also an important outlet for both sexes, given their lack of family responsibilities. While much of their leisure time is spent socializing with others in coffee shops, bars and other locales, listening to music and watching TV also rate high on their priority list. Outdoor activities such as skiing, tennis, and increasingly golf are also popular, while interest in overseas travel appears to be growing, especially among females.

Young singles also tend to be highly receptive to new ideas whether for new products, new brands or new services such as credit cards, direct marketing, etc. Furthermore, they can be effectively reached via T.V. advertising or magazines targeted to either or both sexes such as Focus, Friday and Pia. They also tend to patronize particular stores and shopping areas. Seibu is frequently cited as their favorite department store. Parco and Marui are also popular. Book stores are another favorite haunt while convenience stores are frequently patronized for food and other items. Consequently, young adults are not only an attractive market but also one which is readily accessible, and hence often constitute a prime target for the introduction of innovative new products and services.

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AN INDIVIDUAL ANALYSIS APPROACH
TO CROSS CULTURAL RESEARCH

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Abstract

It is suggested that cross cultural research examined using aggregate analysis often results in superficial or meaningless evaluations of cultural differences. A more realistic approach appears to be individual level analysis to examine how one group of individuals differs from another. This paper reports an application of the multi-attribute attitude model at the individual level on Asian consumers, to highlight the richness of individual analysis and advocates its appropriateness for ethnic research on consumer behavior.

Introduction

Studying consumer behavior in cross cultural settings has been made difficult by the failure of researchers to develop effective approaches to study consumer behavior in differing cultures. Many people would argue that we have not developed appropriate methods for the study of consumer behavior in domestic markets (c.f.: Hirschman, 1986), and this is certainly true in cross cultural situations. Whether the cross cultural research approach is humanistic or positivistic it must be designed to study the characteristics of the consumer in a manner unbiased by the culture of the researcher.

Speece (1986), suggests that consumer behavior is a function of some "underlying universal" characteristics and other "culture specific" characteristics. If this is true, as suggested by Hoover *et al.* (1978) and Peterson and Jolibert (1976), research approaches must be developed to handle both dimensions. Unfortunately, most cross cultural research is conducted by researchers from a foreign culture using methods, and more dangerously, instruments developed in that foreign culture. Nowhere is this more evident in the international market research area.

International cross cultural research is further hampered by the common use of nationality as a surrogate for cultural affiliation. Few consumer behaviorists would be comfortable talking about an "American" culture since we recognize a wide variety of ethnic, social class, and lifestyle subcultures in the American market. Consumer researchers, however, regularly refer to Japanese, French, Chinese, and Singaporean "cultures" as though they were well defined, homogeneous entities. This paper looks at individual analysis as an alternative to aggregation in cross cultural research.

Individual versus Aggregate Analysis

In the study of human behavior, social scientists have long appreciated the importance of in-depth analysis of a person's behavior. The knowledge gained from a thorough study on select individuals provides a strong foundation for extension of research into the group domain, and data gathered through individual analysis are often used to design aggregated studies.

Studying human behavior at the individual level is well accepted in cultural anthropology and clinical psychology. In marketing, however, it is rare to find research at the individual consumer level. A major exception is products in the industrial market where potential customers are relatively few. One reason is the marketer's inherent commercial interest in group or aggregate behavior, since mass marketing involves the actions of segments or groups of consumers rather than the behavior of single individuals. Unfortunately, these approaches make it impossible to see the trees for the forest.

Most marketing research is conducted in the American domestic market where the general characteristics of individual consumers are well known and the researcher often has at least an intuitive feel for the variance in behavior of consumers. When the researcher is a member of the culture in which his study is based, his familiarity and confidence in knowledge about the people studied makes the aggregation of individuals, at least seem, acceptable. The scenario is quite different when the same researcher enters a foreign culture to study consumer behavior. He is likely to bring with him traits and biases that are peculiar to his culture, studying foreign consumers with methods and tools developed in his home culture and rather than for the foreign market.

The problem of bias is particularly serious when the study is aggregated and comparative. In an aggregated study, much information about individual differences is lost due to the need to develop statistics for comparisons of groups. The findings from such studies are easily misinterpreted when the researcher lacks an understanding of the traits and values unique to the members of the culture being studied. When comparisons are then made, spurious results are likely to occur.

Cultural Differences

Cross cultural research in consumer behavior has obvious marketing applications. Most importantly, the research seeks to identify groups of consumers with similar attitudes and behaviors for segmentation purposes. This type of research is facilitated by individual analysis following by clustering or other forms of systematic aggregation. Again, it is more useful to identify similarities in segmentation patterns across cultures than to identify differences. This is facilitated by an open minded individual approach.

A sensible approach to start cross-cultural research is to first spend time studying individuals within different cultures, then, slowly progressing to comparative work when the researcher has enough familiarity with the group. Understanding these characteristics is the key to sound interpretation of cultural difference.

In cross cultural research, the focus has generally been on identifying differences between cultures rather than on seeking common ground. This has led to an interest in comparing means between groups, particularly means in demographic characteristics. Unfortunately, this misses the essence of cultural difference, the variance in structure and operation the results in a different operating environment. Rather than comparing means of variables chosen because they were found to be important in the domestic market, the researcher should attempt to study variables important to the cultural environment being studied. When identical variables are examined, not only differences in means, but differences in variance and distribution should be examined. Foreign environments may be more or less fragmented than the American market, and examining the nature of the individual in the society may give a clue to these differences which are masked in aggregate analysis.

To have meaningful interpretation of comparative research, the researcher has to be equipped with a sound knowledge of the cultures under investigation. Unfortunately, most marketers' knowledge of foreign cultures is limited and, as a result, cross cultural research has not been effective.

It is a lengthy, difficult and costly task to study consumers at the individual level. Marketers rarely invest in such effort. The approach described below provides a simpler, albeit somewhat compromised method to yield the individual level information. The methodology has popular appeal and has been adopted quite extensively. The objective is to illustrate how a method generally used for cross sectional study can be applied to study individual consumers.

An Alternative Compromising Approach

The multi-attribute attitude model is commonly used in attitude research as a tool for studying the behavior patterns of groups of consumers (Fishbein & Ajzen, 1975). The model has characteristics that allow easy adaptation to cross-cultural research. Several issues regarding its usage in marketing have been discussed by Wilkie and Pessemier (1973), including its value as a tool for individual analysis.

A generalized multi-attribute model is as follows:

$$BI = Att = \sum_{i=1}^n E_i I_i$$

Where Att = Attitude
 BI = Behavior Intention
 E_i = Evaluation of Attribute i
 I_i = Importance of Attribute i
 n = Number of salient attributes

In a typical study, several brands of product will be examined. For each brand, the relationship between attitude and behavior intention is examined. The studies usually focus on relationships between groups of subjects.

In most cases, data collected for an aggregated study have little value for individual level analysis. An aggregated study cannot provide answers to many questions that a researcher may ask about individual consumers. For instance, does the relationship found for the group exist for a specific individual? Is the relationship generalizable across products for a person? Is this person a group norm? If not, how does he differ from the group norm? To find answers to above, a researcher often has to investigate beyond the findings of an aggregated study.

In the application of the multi-attribute attitude model, most studies use limited numbers of products and brands, ruling out individual level analysis. If the same data are to be used to investigate attitude/behavioral intention relationships at the individual level, the results will not be meaningful due to limited number of data points in the analysis. The following example on one product with three brands is sufficient to illustrate differences in the data structures for aggregated and individual analyses.

Data Structure for Aggregate Analysis

	Brand 1		Brand 2		Brand 3	
	BI	Att	BI	Att	BI	Att
Subject 1	Y_{11}	X_{11}	Y_{21}	X_{21}	Y_{31}	X_{31}
.	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset
.	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset	\emptyset
Subject n	Y_{1n}	X_{1n}	Y_{2n}	X_{2n}	Y_{3n}	X_{3n}

Data Structure for Individual Analysis

	Subject 1			Subject n	
Brand 1	Y_{11}	X_{11}	...	Y_{1n}	X_{1n}
Brand 2	Y_{21}	X_{21}	...	Y_{2n}	X_{2n}
Brand 3	Y_{31}	X_{31}	...	Y_{3n}	X_{3n}

Assuming interest is to study relationships between attitudes and behavioral intentions, the researcher will correlate BI with Att across subjects for each brand aggregating across consumers. BI/Att relationships across brands for each subject are examined for individual analysis. It is clear that while the data in most studies are good for the aggregated analysis, they are inadequate for individual level analysis.

Method

In this study, individual level analysis was used to cover a wide range of product categories. A total of 132 products were studied, including automobiles, watches, jeans, toothpaste, fast food, shampoo, departmental stores, sports shoes, beer, pens, color televisions, and calculators. For each product, three brands were examined. To simplify the task of filling in the questionnaire, four standardized attributes were used, i.e., price, quality, brand/store image, and availability/accessibility. A questionnaire was used for the study. The total sample was 129 subjects representing a cross section of the Singaporean population. This research was conducted as part of another larger three-month panel study of Singapore consumers.

Analysis

The individual level analysis was performed to accomplish the following objectives:

1. to examine individual attitude patterns for the population.
2. to categorize individuals based on individual attitude patterns using attribute saliency as the categorizing variable.
3. to describe market segments based on attitude patterns.

For each subject in the sample, analysis was performed regressing attitudes with BI. The four attitude categories in the model were not summed, but were treated as independent variables in the analysis. This analysis was conducted for each of the subjects (n=129) in the sample population. In each analysis, there were 36 data points (12 products x 3 brands). The stepwise option of multiple regression analysis was adopted.

Looking at results of individual regressions, greater insights of individual consumers can be gained. Much of the information that he is able to extract from individual analysis is not available from aggregated analysis. For example, using the psychographic and demographic profiles developed in McCullough and Tan (1986) the following individual descriptions can be developed:

1. The extent one's attitude is related to BI. Among the 129 subjects, R^2 ranged from .11 to individual subjects are presented for illustration:

Subject A: R^2 of .47. Price, availability and image entered the equation in that order. Based on his psychographic and demographic profiles, he is above average on education and income. He holds more western values than the average Singaporean.

Subject B: R^2 of .57. Availability was the only variable in his equation. He is convenience oriented with strong western values. His age is younger than the average.

Subject C: R^2 of .12. Price was the only important factor. With strong Asian and family values he is inclined to be influenced by external factors in purchasing with a low effect of his own attitude structure.

2. The number of attributes are consistently used in buying. From the above, it is obvious that some subjects are like A, who use several attributes in buying, while there are others like B and C, who consistently rely on a single attribute.

Using psychographic and demographic variables a discriminant analysis was performed to classify the subjects into segments based on their attribute saliency. The function developed correctly categorized 66 percent of the subjects into the four groups as shown below:

Attribute Chosen	n	Predicted Choice			
		Price	Quality	Image	Availability
	129				
Price	37	23	4	2	8
Quality	28	4	17	3	4
Image	12	1	0	11	0
Availability	25	4	4	1	16

3. Saliency of attributes for a person across product types. From above, one notices that availability is consistently important to B while price is important to C.

Individual level analysis can be easily extended to cross-sectional analysis, if necessary. Aggregate data can be generated by grouping individuals. The following are generated from 129 subject regressions:

The average R^2 for the sample was .36

A large majority (55 percent) of subjects used only one attribute, and 30 percent relied on two attributes.

Saliency of attributes tended to differ among subjects. The breakdown of subjects' most salient attributes were:

- price--34 percent
- quality--28 percent
- image--13 percent
- availability--25 percent

For researchers interested in aggregated analysis, the above aggregated data can be analyzed with other demographic and psychological variables. Readers can refer to Tan and McCullough (1986) for detail.

Conclusion

In performing cross-cultural research, the researcher should possess a sound knowledge of the consumer environment in which he is working. This requires a thorough understanding of the consumer at the individual level. Unfortunately, obtaining richness of understanding through individual analysis or humanistic inquiry is expensive. This paper has presented an initial look at methodology to provide this information within the context of conventionally accepted marketing research.

As marketing becomes more international and cross cultural business activity becomes more sophisticated, understanding the foreign environment will become increasingly important. In depth understanding of the foreign consumer and his environment appears to be the only feasible approach to success.

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EFFECTIVE INTERNATIONAL MARKET POTENTIAL ASSESSMENT: CHINA

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Abstract

A comprehensive view, including changes in China's economic structure, is taken to make a meaningful assessment of market potential. A spectrum approach, outlining three scenarios in regard to China's open door policy are discussed. Focus is then placed on the changed market profile and international marketing opportunities in China's market.

Introduction

How should international marketers assess the market potential of a developing country like China in the mid 1980s and further? One naive approach used often has been to estimate its "demand" simply based on the population size [Stewart 1985]. Some have gone further and predicted China's market potential by population and current purchasing power [Sokoloff 1982]. But this is not enough; developing economies can change rapidly. Therefore, assessment of market potential requires an understanding of changes in the economic structure and resulting economic performance; economic policies and the business environment. In other words, a comprehensive approach is needed to make a meaningful assessment of China's market potential now and in the future.

Changes of the Chinese economic structure in the past few years have caused a tremendous impact on its economic performance and external economic relations. For example, in the 1980-1985 period, the total product of society had an average annual growth rate of 11.3 percent and, the average annual growth rate for China's foreign trade was 10.5 percent [Beijing Review 1986]. This indicates that analyzing China's market potential from the perspective of international marketers needs insight as to the economic structure change.

This paper uses the spectrum approach to policy study. Then three scenarios in regard to China's open door policy are discussed. After that, the discussion focuses on the changed market profile and marketing opportunities in China's market.

Spectrum Approach to Policy Studies

In free market economies, formation of the development pattern has been a rather evolutionary process due to the nature of the system. In centralized economies policy changes can often bring about dramatic unexpected results in the development pattern.

The spectrum approach in context studies the spectrum of various possible foreign economic policies. The idea is that, in reality, for governments all open door policy options vary in degrees. There can be no simplistic categorization into either "open" or "close". Most countries position their policies somewhere in the middle range of the spectrum. If the pros and cons for each possible open door policy scenario for a country can be revealed, then the degree to which that country will retain openness to the

international market can be assessed. We believe this approach is very useful for a country like China which is experiencing a policy change.

The spectrum approach already has been used for example in comparative economics. With the concept of the spectrum, economic systems can be positioned on a scale rather than in the two traditional categories, "market" and "planned". Most economies are located somewhere in the middle range of the scale. This approach provides a way to understand the reality [Loucks 1969]. A country obviously could have different external economic policies toward different partners. But we can still identify a country-oriented general policy on the spectrum.

What we are interested in is not China's policy to any specific country, because the choice of trading partner pattern toward a specific country involves many factors which are governed by international politics and beyond international marketing. However, we believe that corresponding to China's economic strategy and economic structure, the country will have a basic stance in external economic relations which can provide information about its market potential. This is of interest to international marketing researchers.

Three Scenarios of China's Open Door Policy

China's open door policy can be discussed in terms of foreign trade and foreign investment. There are three possible policy scenarios. The first is the choice of fully closing the door. The second is the choice of fully opening the door. The third is the actuality of a partial and gradually opening door. The first two are extremes and will be briefly reviewed while the last will be discussed in depth.

Scenario One: A Fully Closed Door

A fully closed door is not a feature of a modern society. The evidence indicates that external economic exchange and division of labor in the increasingly integrated international economy are necessary conditions for economic development. Since the late 1970s, the Chinese leadership have rejected the closed door and have been making great efforts to reform their economy. The reform has moved away from the rigid planning economic organizational structure and altered the development pattern. The results of the reform are remarkably favorable.

After tremendous changes in China's economic organizational structure and development strategy, the open door policy has already become an inseparable part of its economic development. The total value of imports and export accounted for about 10 percent of China's national income in each year during 1950-1979 [Zhiyang 1985]. But in 1985 it was well above 20 percent [Guangming Daily 1986]. In 1984, China's export volume ranked 16th in the world, from 28th in 1980 [China Daily 1985]. Thus, a reversal to the first scenario of a fully closed door is highly improbable.

Scenario Two: A Fully Open Door

The second scenario is a fully open door to the international market. This is quite an unrealistic position because, while the Chinese pursue economic development, they also want to avoid the possible risks

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of depending on the international market for growth by opening the door too wide. The lessons of China's history and that of some other developing countries have made the Chinese fully aware how dangerous it is if a country cannot maintain a relatively high economic level on its own. Considering the population size of China, it cannot be expected that an economic miracle will happen without a strong indigenous economy which is not dependent on the help of the rich industrial countries. Moreover, in the long run, independence as one of China's goals determines that the fully open door policy will not be chosen by the Chinese in the 1980s and even beyond.

Scenario Three: A Partial and Gradual Opening Door

The rejection of the two extremes leads to consideration of the third scenario; which is a partial and gradual open door policy. Tremendous changes in market accessibility have taken place in recent years because the centralized economy is gradually integrating more of the market mechanism into the original system in order to increase economic efficiency. In today's China the development strategy heavily depends on external economic relations to obtain funds, know-how and technology. The easier market accessibility is evident from the following facts. The Chinese government allows foreign companies, including banks to open offices in China [Quarterly Economic Review of China, North Korea 1984].

- decentralization has been taking place not only in the domestic economic sectors but also in the foreign trade sector [Beijing Review 1985].
- China has opened its door to foreign investment; of which very little was permitted in the past thirty years or so.
- Special economic zones in coastal cities and inland areas have been granted more authority to trade independently with foreign traders and accommodate foreign investors.
- In recent years, the Chinese domestic market has been partially opened to foreign joint ventures for manufacturing products for consumption in China. Such products originally were regulated so that they could be sold only abroad [Beijing Review 1984].
- New treaties and legislation regarding foreign economic affairs have created a relatively confident atmosphere for foreign businesses even though there is much room for improvement.

However, indications show that the Chinese authorities have been opening the door slowly and cautiously. For example, attracting foreign investment is one new and important component of China's open door practice. Tracing progress in this sector is indicative. In 1980 four special economic zones were set up in order to experiment with assembly-manufacturing and compensation trade. Then the Chinese-foreign joint venture came into use. Following the relative success of these four special economic zones, fourteen coastal cities and three of the richest coastal regions were also opened to the outside world. Later, more inland provinces and cities received the power to deal with external economic affairs independently as the policy of decentralization gathered momentum. Also new legislation allows wholly foreign owned businesses to operate in China.

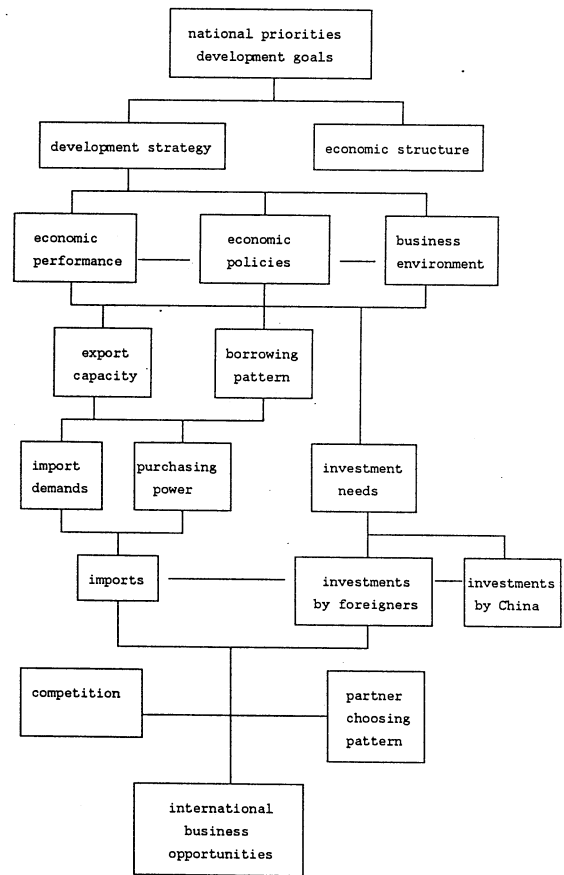
Causes For A Permanent Partial Open Door

The partial open door position is inevitable under the Chinese government plans. The economic growth rate stipulated by the Chinese authorities in their plans is about seven percent annually to the year 2000. On the one hand a fulfillment of this growth necessitates

change in the economic organization structure from rigid central planning to a combination of central coordination and market regulation. It also necessitates a change in the development pattern from an imbalanced strategy which advocated heavy industry to a balanced strategy. These changes are aimed at an increase in efficiency, and complementary development. The partial open door policy is an inseparable part of this whole policy package. It can bring into the country advanced technology and know-how, management knowledge and skill, capital investment and funds necessary for China's modernization program.

On the other hand, the open door policy cannot be implemented without limitation. These should be studied in particular context. The main practice of the open door policy is concentrated on foreign trade and foreign investment. The relationship of such trade and investment with the domestic economy is illustrated in Figure 1.

**FIGURE 1
CHINA'S ECONOMIC STRUCTURE AND INTERNATIONAL BUSINESS OPPORTUNITIES**



It can be conceptualized that national priorities and development goals, development strategy, economic structure, economic performance, economic policies, and the business environment constitute the domestic bases for external economic activities. This base determines the export capacity, borrowing pattern and investment needs. These factors, further determine the level of imports and foreign investment which would mean business opportunities for international businesses. The reality is that China's export capacity, and conservative borrowing practice places some substantial constraints on its imports. The other sector of this

market, foreign investment, is often limited by the business environment.

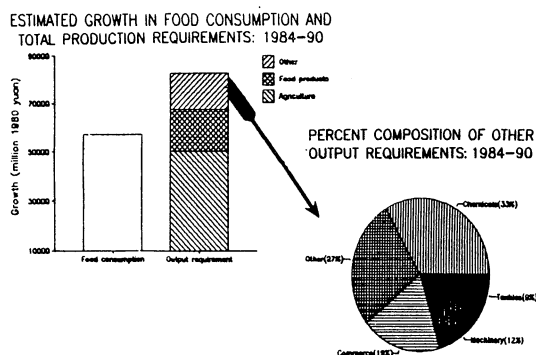
In conclusion, the third scenario, the partial and gradually opening door policy is the most feasible and appropriate choice. Being aware of the third scenario, has important international marketing and business implications. Otherwise, one could easily be led to over-optimistic estimation or over-pessimistic estimation about China's market potential. Understanding the policy and corresponding background would provide a more realistic basis to evaluate the Chinese market.

The Changed Market Profile

China is a market with a considerable potential. It has over one billion people, nearly one fourth of world population. China also possesses various mineral wealth. It has coal deposits of various types, petroleum resources with low sulphur content, widely distributed iron-ore deposits, and many non-ferrous metals [A General Survey 1984]. But China is still a developing country with per capita GNP of only US \$300 [World Development Report 1985]. The majority of the Chinese population are engaged in agriculture and 68% live in rural areas.

China's consumers spend almost 60% of their incomes on food, and another 10-15% on clothing. Housing/rent expenditures are low in urban areas due to subsidization of urban housing. Consumption of durables in terms of numbers per household are in rank order--watches, bicycles and radio sets. The attractiveness of inexpensive watches and radios is understandable; bicycles are the primary mode of passenger transportation and are also used to haul various materials. Further the television market is growing phenomenally. Already there are 85 television sets on average per 100 urban households [Taylor 1985]. Most of the above goods are domestically produced. Of China's imports close to 80% consist of producer goods. Thus, the market for imported consumer goods is limited and likely to remain so. But international marketers should know how growth in Chinese domestic market for consumer goods in turn can create demand for producer goods; thus raising import demand for the latter products. Chart 1 is indicative of this effect.

CHART 1



Source: Jeffrey B. Taylor, "Preliminary Projection of Consumer Demand for Food in China," U.S. Bureau of the Census, Center for International Research Staff Working Paper, 1985 (pending).

International marketers can use this methodology for studying the effects on imports of a growth in demand for other specific consumer products that interest them.

China's potential can be released only when the economy takes off and maintains sustained growth. Two econometric projections, one by the World Bank, show that per capita consumption will grow by at least 4.5 percent a year to 1990 [Min 1984]. According to the World Bank model such growth will remain between 4.1

and 5.3 percent a year in the period 1990-2000 AD. Realizing the economic take-off and maintaining sustained growth largely depends on high but attainable goals, appropriate economic strategy and an efficient economic structure.

During 1950s-1970s, China adopted a relatively closed door policy. Therefore it was a very limited market for international marketers. The causes of this were the rigid economic structure, small volume of exports, non-borrowing policy, low level of economic development, the economic plans and policies, politics and ideology, and international environment. For the Chinese, the opportunity cost of the closed door policy was extremely high because they failed to benefit from economic exchanges with the international market.

The lack of incentive and motivation probably was the most crucial handicap for the Chinese economy. Decentralization and centralization took place several times between the central administration and provincial administration before economic reform was introduced in the late 1970s. It gradually became clear that changes in the economic structure should be initiated to improve the performance of the economy. At the same time, China reconfirmed the ambitious goal of modernizing the country. Later, it decided to quadruple the output value of agriculture and industry by the end of year 2000. Also it was concluded that, without any change in the economic structure, it would be difficult to reach the goals.

The directions of the economic structure reform are to increase incentive and motivation in the system; to further decentralize the decision-making down to the enterprise level; to introduce market forces into the planned economy; and to expand economic exchanges with other countries. The reform first succeeded in rural areas. Then it was introduced to urban areas, international trade, foreign investment, and the banking system. Vitalizing the domestic economy and opening it to the outside world are the two basic guidelines.

In order to support China's modernization, the Chinese need to increase their exports so that they can import more and attract foreign investment to their country. To the Chinese, the constraints lie in their export capacity, the borrowing pattern, and their pay-back capability for foreign investment. They want to make good use of industrial imports and foreign investment so that they can develop their own basis for development.

The vitalized 1980s Chinese economy has increased its ability to export which in turn has strengthened its foreign exchange purchasing power from the international market. This means there are more chances for international marketers to sell goods to China. Also, the healthier domestic economy resulting from the reform is providing more opportunities for international businesses.

In addition, to merchandise exports, other service foreign currency earning businesses such as tourism, and building and engineering services abroad are flourishing as central government control is relaxed and the new economic structure emerges. These service exports substantially increase China's importing capacity in the international market. According to Chinese statistics, China's foreign exchange service income reached US \$5.1 billion in 1985, while foreign exchange expenses totalled US \$1.61 billion.

Attitudes and policies on foreign investment have gradually changed in the 1980s in China towards one of welcome. Now the Chinese government allows all forms of foreign investment practice: assembly-manufacturing, compensation trade, joint ventures, and wholly foreign owned subsidiaries [Beijing Review]. Although again one can observe the partial and gradual opening

of the door by taking taxation as an example. To provide incentives to foreign investors, a series of favorable treatments are offered. In the special economic zones joint ventures, cooperative enterprises and wholly owned foreign enterprises, be they productive or non-productive enterprises, all pay 15 percent income tax. However, in the coastal city economic and technological development areas, only productive enterprises enjoy this preferential tax treatment. Under other circumstances, tax deduction from the normal level and tax holidays will be applied in different degrees according to China's planned priorities. Other examples of favorable treatment can be given. In October 1985, China further relaxed its control over foreign exchange. It allowed the enterprises with either overseas Chinese capital, or foreign capital, or Sino-foreign joint venture to retain their foreign exchange receipts for their own use without selling them to the Bank of China. They could also apply for loans from domestic and overseas banks to meet business operation needs [China's Foreign Trade 1985]. Moreover, in order to provide more reasonable terms to the investors who are or will be engaged in joint ventures, China will allow some joint ventures which have a long pay back period to extend their operations to fifty years and beyond from the original 10 to 30 years before disinvestment [People's Daily 1985].

Compared with the situation before 1978 when there was little direct foreign investment and foreign debt was minimal, the progress in attracting and employing foreign investment has been indeed significant. During the 1979-1985 period, the volume of foreign loans reached US \$20.3 billion, and the contract value of direct foreign investment totalled US \$16.2 billion [Beijing Review 1986]. Let us now focus on the opportunities for international marketers in China.

Marketing Opportunities in China

The opportunities in the Chinese market, overall, are growing. The bottlenecks for China's economic development lie in transport, communication and energy. Therefore as the government wants rapid economic development, these sectors create demand for imports, foreign investment, and international cooperation. Transportation in China mainly depends on the railway system. Compared to 30 years ago, rail freight volume today is 31.07 times greater, while railway mileage has increased only 2.29 times, and the number of locomotives and wagons has increased only 2.50 times. The growth of railway carrying capacity is so far short of freight volume growth that some trunk railways can meet only 50-70 percent of their actual needs. The new Five-Year Plan (1986-1990) and a new research study titled "China in 2000" admit that by the end of 1990 the demand pressure on transport can not be totally alleviated [People's Daily 1985]. Furthermore, as China tends to diversify transport loads to all types of transportation, the need for trucks, ships and highway systems, and ports facilities, will increase dramatically. In order to lay a solid transportation foundation for economic development, foreign investment in this sector will be given higher priority [China Daily].

There is also a big gap in the communication industry. A survey conducted in January, 1983 indicated that only one person in every 200 in China has a phone. Only five other countries in the world have such a low number of telephones per capita [Beijing Review 1984]. Foreign technology and investment are sorely needed in this area. Electricity generating is another bottleneck. The supply of power cannot meet the needs owing to the relatively low energy efficiency, the fast growing economy, and the low rate of growth of the energy industry. There is a possibility that a serious energy supply shortage will occur by the year 2000 [People's Daily 1985]. In trying to develop the energy

industry, the Chinese face the problems of lack of funding; because this industry needs an enormous initial investment and has a long pay back period. In the future development of the energy industry, because of China's rich coal and hydraulic resources, stress will be laid on the simultaneous development of thermal and hydro plants. Nuclear power plants are also needed, as along the coast nearby coal and hydraulic resources are not available.

China's Five-Year Plan 1986-1990 is targeted on transforming and enlarging a number of industrial sectors. Thus there will be opportunities for international marketers in the following industries: machine-building, electronics, metallurgy, chemicals, building materials, light industry, textiles, packaging, medical equipment, pharmaceutical, construction, agriculture, forestry, and animal husbandry. The Plan also focuses on some crucial new projects: large hydroelectric plants, nuclear power plants, strip-mining coal operations and harbors [Beijing Review 1984].

A goal of the Five-Year Plan is to upgrade the technology of enterprises. Technological upgrading is needed in almost every sector of the Chinese economy, from high technology, such as the computer and aircraft industries; to ordinary technology such as in food processing packaging; and managerial skills; such as hotel management and consulting. However, since China has only a limited amount of foreign exchange, they will only have the choice of buying technology on a selective basis. Accordingly joint ventures, cooperative enterprises with foreign investors, solely foreign-owned enterprises have been developed in the key project sectors of energy, railways, harbors, and raw and semi-finished materials [Beijing Review 1986].

DISCUSSIONS AND CONCLUSIONS

While there are increasing opportunities in the Chinese market, there also exist some constraints. This is the obvious consequence of a partial open door policy. The constraints can exert a negative impact on international businesses conducted in this market. Being aware of them is of great importance. The constraints are discussed below:

1. The centralized control over foreign economic affairs will be maintained. Although there are many relaxations in external economic relations and local governments have been granted some authority to do businesses with foreign firms. In practice, rather than directly intervening in foreign trade and investment, the government uses import and export licensing, and specialized import and export corporations and institutions, to monitor foreign economic activities, and implement control and coordination.

2. The conservative foreign borrowing policy is impossible to change in the short term. The Chinese authorities are conservative in borrowing because they believe that China's export ability is not strong enough; while it is crucial to pay back any borrowing in order to preserve their independence of action. This attitude is steeped in history and the Communist approach. Most exports are primary products such as grain, coal, oil, and other raw materials; those prices fluctuate very frequently in the international market. The other main exports, textile products and clothing, often find difficulties increasing their market shares because of the increasing protectionism in the world market.

In recent years, China's foreign trade has had a deficit every year, which has led to some concern for the Chinese Government. If China's exports decrease due to changes in the international market, it is very likely that imports will be controlled sooner or later.

3. The infrastructure in China is relatively weak. It will take time to achieve improvement in sea and air ports, highway system, telephone system, and other public utilities.
4. Legislation in China concerning foreign economic affairs and firms is still in its early stage and not "equivalent" to international free market country standards. Because of lack of experience in new sectors after a long time of isolation, improvement in the legislation is relatively slow.
5. Operational constraints exist. They result from cultural differences, geographic distance, bureaucracy, and management and technical skills. Without enough necessary preparation before arrival in China, operational problems may not be properly handled and could even lead to business failure. However, it is possible for foreign businessmen to have cultural orientations before leaving for China, and obtain some assistance from qualified local people. Therefore they can learn to deal adequately with operational constraints.

The nature of the Chinese market has changed in the 1980s. It has an increasing importing capacity, new opportunities for foreign investors and improved accessibility. Besides all the factors mentioned in the preceding discussion, another factor is also important although it is beyond economic analysis. That is political stability in the country. This can either increase business confidence or jeopardize it. At this stage, there does seem to exist increasing foreign business confidence in the Chinese market.

From the analysis of priorities and shortages, which function as demand indicators as the partial open door policy continues, international marketers can importantly use demand pattern analysis along with other methods, in order to estimate demand [Kirpalani 1985]. China's purchasing will be highly correlated with its industrial growth sectors. International marketers to be successful must also study the various alternatives in China's investment regions, its sectoral development and consumption patterns. Finally, from what has been discussed earlier international marketers can take comfort from the fact that the partial open door policy is unlikely to ever turn in the negative direction of closure.

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Explaining the Effects of SENSING IS EVALUATING Metaphors:
The Mediation of Vividness and Novelty

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Taylor Hale Emerson

Abstract

In the studies reported in this paper, it was hypothesized that the persuasive effects of product claims couched as metaphors would be mediated by the novelty and vividness of the metaphors: novelty creates arousal, and vividness makes for ease of elaboration. The effects of arousal and elaboration on an individual's product evaluations would in turn be mediated by factors internal to the evaluator such as knowledge of and liking for the product category, and by factors external to the evaluator such as pacing of exposure and number of exposures.

Study 1 was designed to investigate the relative effects on product evaluation of a standard metaphor, a novel-pallid metaphor, and the corresponding abstract (i.e. non-metaphorical) expression, when judgment was made after single and multiple exposures by individuals who liked the product category and by those who were indifferent to it. Significant interactions between slogan type, number of exposures, and liking for the product category were observed: product evaluations were affected by slogan type after a single exposure, but not after multiple exposures. After a single exposure, the novel-pallid metaphor was less persuasive than either the standard metaphor or the abstract expression. Increasing the number of exposures made the judgments of those enthusiastic about the category more favorable, and the judgments of those indifferent to the category less favorable.

Study 2 was designed to compare the effects on product evaluation of novel-pallid and novel-vivid metaphors with standard metaphors. After a single exposure, novel-pallid metaphors were associated with less favorable judgments than standard metaphors, and novel-vivid metaphors were associated with more favorable judgments than standard metaphors.

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Abstract

The present paper serves as a progress report of a current program of research aimed at understanding the effects of subjective mood states on the processing of information presented in advertisements. In particular, the distinction between retrieval and computational processes is used to construct a model of how subjective affective states influence product evaluations. Four experiments are used to test various aspects of the model. The data are consistent with the model in most respects and they suggest that several important variables have previously been ignored.

Introduction

Researchers are now paying considerable attention to the effects of subjective mood states on various aspects of consumer behavior. The underlying reason for this attention is clear: mood matters. Reliable mood effects have been reported from several different laboratories, and by researchers of widely divergent theoretical persuasions. Moreover, a wide array of experimental paradigms and mood manipulations have been employed. In short, people starting at very different places have all come to the same conclusion. Mood is important and its effects need to be accounted for.

Although mood can affect many different facets of consumer behavior (see e.g., Gardner 1985), most work continues to be in the area of memory and judgment. Bower and his colleagues have reported an impressive series of studies demonstrating that mood can have strong and consistent effects on memory (Bower 1981; Bower, Gilligan, and Monteiro 1981; Bower, Monteiro, and Gilligan 1978). Other studies have found that these effects extend into the domain of judgment and behavioral decision making (e.g., Isen 1984; Isen, Clark, and Schwartz 1976; Isen, Means, Patrick, and Nowicki 1982).

Researchers concerned with advertising have found many implications of this work. It is possible, for example, that media contexts can create a particular mood state which, in turn, affects a consumer's memory, brand evaluation, and so on. Alternatively, the ad itself may create a mood that has similar effects (cf. Aaker, Stayman, and Hagerty 1986). In both cases, the ultimate effect of ad exposure would be a function of both the information conveyed in the ad and the consumer's subjective affective state. In other words, the affective state of the consumer modulates the effect of the ad.

The effects of mood pose a serious challenge to information processing approaches to consumer behavior. Philosophers and psychologists have long made a distinction between cognition and affect, thinking and feeling, and the rational and irrational sides of existence. How seriously should such dichotomies be taken today? What role, if any, should they play in our theoretical models? Do they suggest that the "laws" of behavior will be different, depending upon whether the cognitive system or the affective system dominates?

One might think that mood effects are important because they are outside the boundaries of information processing models. I believe that this is a mistake. If information processing is truly a metatheoretical system, then mood effects must be accounted for in the same way as any other type of effect, namely by specifying the computational mechanisms that are involved. Mood effects pose an important and difficult challenge because information processing theorists have seldom dealt with the affective system. However, there is nothing in principle that prevents an explanation of such effects in information processing terms. At the very least, it would seem premature to

conclude otherwise. In other words, there is no reason for why this should not be treated as an open question.

Let us assume that information processing theorists must, at the very least, attempt to account for mood effects in terms of their models. If for no other reason, this should be done to test the limits of the information processing approach. How might this be accomplished? One way to begin is to delineate when mood does and does not have an effect in terms of the cognitive processes that are activated at any given time. Another related approach is to look across groups of subjects when there is reason to believe the groups use different processes to perform the same task.

The general issue of whether mood can be accounted for in information processing terms is an extraordinarily difficult one. In fact, it is probably premature at this time to even ask such a question because so little is known about mood effects themselves. My objective in the remainder of this paper is much more modest. Specifically, I will try to introduce a general approach that can be used to study mood within an information processing framework.

A Preliminary Model

The purpose of the first experiment was to examine whether an information processing model can make a specific a priori prediction about when mood will affect performance on a particular task. In this case, the task is one of forming a product evaluation and the model is one that was initially outlined by Lichtenstein and Srull (1985).

The model of Lichtenstein and Srull (1985) distinguishes between on-line and memory-based processing (for related discussions, see Hastie and Park 1986 and Lynch and Srull 1982). Consider first on-line processing. This would occur whenever a person acquires product-related information with the implicit or explicit objective of making an evaluation of that product. When this occurs, a global evaluation of the product will be made at the time of information acquisition and stored in memory separately and independently from the specific information presented in the ad.

Memory-based processing is quite different. In many cases, a person will acquire product-related information with no specific objective in mind, or only a very general objective such as to comprehend the information being presented. Under these conditions, a global evaluation of the product will typically not be made at the time of information acquisition. If later asked to make a specific evaluation of the product, the person will be forced to retrieve the previously acquired information from memory, or some subset of it, and use this information as a basis for his/her evaluation of the product. In other words, a judgment will need to be computed on the spot.

Such a model has been found to be very heuristic. For example, one prediction is that the correspondence between the evaluative implications of whatever facts can be recalled and the global evaluative judgment that is made should be much higher in memory-based than on-line processing conditions. In an initial test of this hypothesis, Lichtenstein and Srull (1985) found in 12 out of 12 independent comparisons that the correlation between recall and judgment was higher in memory-based than on-line conditions. Moreover, the correlations in the memory-based conditions were universally large and statistically different from zero. The mean correlation across 12 conditions was .64 in the memory-based condition and .22 in the on-line condition.

More recently Hastie and Park (1986) have replicated these

effects by using a slightly different paradigm. The on-line condition was very similar to that described earlier. However, for a memory-based condition, they had subjects anticipate making one judgment, but later asked them for a different, unrelated judgment. Across four separate experiments, the average correlation between recall and judgment was .51 in the memory-based condition and .16 in the on-line condition. Srull (1985) also reported several conceptual replications using slightly different orienting tasks. In short, these findings are very strong and replicate across a variety of laboratories, stimulus sets, content domains, and delay intervals.

Experiment 1

The theoretical model described above has been quite successful in accounting for past research, and it has been directly supported in several recent experiments (see e.g. Srull 1985). For both of these reasons, it is useful to ask whether the model can also be used to conceptualize the role that subjective affective states might have on product evaluation. In fact, extending the model into this domain would appear to be a very straightforward process. If the processing objectives of the subject are a determinant of exactly when a product evaluation occurs, they should also affect the influence of subjective affective states on the judgments that are made.

The model presented suggests that affective states at the time of encoding will influence the judgments of subjects using on-line processing because the judgment is being formed at the same time the affective state is being experienced. On the other hand, affective states during encoding should not affect the evaluation of subjects using a memory-based processing strategy. This is because the evaluation is not computed until the time of judgment.

Subjects in the first experiment were undergraduate students who came into the laboratory and were put into either a positive, neutral, or negative mood using the involved recollection procedure previously described by Srull (1983). In brief, subjects enter a quiet, dimly lighted room and are encouraged to completely relax. They are then asked to privately recall everything possible from a previous strongly affectively toned event in their personal life (except in the neutral condition). Every few minutes, subjects are given a "probe" that encourages them to concentrate on every detail concerning what they were thinking and how they felt during the actual experience.

The procedure is similar to those that attempt to induce mood states with hypnotic suggestion (see e.g., Bower 1981), except that subjects are not self-selected and there is no attempt to put them into a true hypnotic trance. Nevertheless, the mood states that result can be quite intense. The procedure has proven to be quite effective and some of the effects it produces are inconsistent with the demand characteristics of the situation (Srull 1983). Thus, there is converging evidence that an actual mood state is phenomenally being experienced.

Following the mood induction procedure, subjects were shown a single (modified) print ad. It contained ten separate attribute values for the Mazda RX7. The information was adapted from ads actually used by the company. It was changed simply by revising the sentences and putting them into paragraph form.

Subjects read the information at their own pace under one of two conditions. Subjects in the on-line condition were told to read the ad with the purpose of forming an evaluation of the product so that they would later be able to judge how desirable it would be relative to other competing brands. Subjects in the memory-based condition were told to simply comprehend what was being said.

After subjects had read the ad, they were dismissed and asked to return in 48 hours. At that time, all subjects were put into a neutral mood and asked to evaluate the product without being re-exposed to the original ad.

Specifically, subjects were asked, "Assuming you wanted to purchase a product similar to the Mazda RX7, how desirable do you think this particular brand would be?" Subjects made their ratings on a scale ranging from 0 ("very undesirable") to 20 ("very desirable").

The results provided considerable support for the model. In the on-line processing condition, the mean evaluative rating was 13.6 in the positive mood condition, 12.4 in the neutral mood condition, and 10.2 in the negative mood condition. Thus, the mood state of the subject had a strong and consistent impact. Ratings were displaced from their neutral baseline in both the positive and negative mood conditions, indicating that the mood effects were symmetrical.

Ratings in the memory-based condition were quite different. The mean evaluative rating was 12.6 in the positive mood condition, 11.9 in the neutral mood condition, and 12.2 in the negative mood condition. Note that subjects in a positive mood gave less positive ratings than those in the on-line condition, and subjects in a negative mood gave less negative ratings than those in the on-line condition.

In summary, mood had a much greater influence in the on-line condition than in the memory-based condition. It is important to remember, however, that only mood at the time of encoding was manipulated. Theoretically, subjects in the on-line condition were making their judgments of the product at the precise time the mood state was being experienced. According to the model, however, this was not true of those in the memory-based condition. Theoretically, these subjects would be forced to compute the judgment at the time it was requested, a time at which they were all in a neutral mood.

Experiment 2

The model suggests that the mood state of the subject will only have an effect on product evaluation if the mood is being experienced while the evaluation is taking place. The results of the first experiment are consistent with this in that mood at the time of encoding only had an effect in the on-line processing condition. Theoretically, those engaged in on-line processing were computing the judgment at the time of input (encoding).

Subjects who engage in memory-based processing are assumed to use a much different process. Because no evaluation is computed on-line, any such judgment must be made at some later time. In order to form a judgment, subjects must search memory for relevant information and integrate it using some type of combination rule. In other words, the product evaluation is computed at the time of judgment rather than at the time of input. One implication of this is that affective states at the time of judgment should affect the evaluations of those subjects using memory-based processing. This is so because the computation will be made while the affective state is being experienced. However, when subjects form their evaluations on-line, affective states at the time of judgment should have no effect.

Experiment 2 tested these predictions by using a procedure comparable to that used in the first experiment. All subjects were first placed in a neutral mood. Then they were shown the ad for the Mazda RX7 and told to read the information at their own pace. As before, subjects in the on-line condition were told to read the ad with the purpose of forming an evaluation of the product so that they would later be able to judge how desirable it would be relative to other competing brands. Subjects in the memory-based condition were told to simply comprehend what was being said.

After subjects had read the ad, they were dismissed and asked to return in 48 hours. At that time, they were put into either a positive, neutral, or negative mood and then asked to evaluate the product without being re-exposed to the original ad.

Although not quite as strong as in the first experiment, the data are quite consistent with the model here as well. For those subjects who engaged in on-line processing, the mean product evaluation was 11.8 in the positive mood condition, 11.9 in the neutral mood condition, and 12.2 in the negative mood condition. Note that the means associated with each of the mood conditions are very close to the neutral baseline. As expected, mood at the time of judgment has no effect when on-line processing has already occurred.

Those subjects who engaged in memory-based processing showed a quite different pattern of results. As predicted, mood had a strong and consistent effect in this case. The mean evaluative rating was 12.9 in the positive mood condition, 12.2 in the neutral mood condition, and 11.1 in the negative mood condition. Theoretically, this is due to the fact that only memory-based subjects were making their evaluations of the product at the time the mood state was being experienced.

Experiment 3

In the first two experiments the processing objectives were experimentally manipulated and comparisons were made across experimental conditions. The philosophy behind the third experiment is somewhat different. Subjects are first classified as either "novice" or "expert" and the comparisons are then made across the groups of subjects. This is relevant to testing the model if one assumes that experts and novices naturally use different processing strategies. In other words, rather than experimentally manipulate processing objectives, they are left free to vary naturally.

It is reasonable to assume that experts and novices will process information obtained from an advertisement differently. Novices, by definition, have little prior information and only limited experience with the product class. As a consequence, they will be forced to find some algorithm to combine specific items of information. In contrast, experts will have a much richer knowledge base to begin with. They will know which attributes are most important, they will have prior beliefs about how attributes are related to one another, and they will have already formed many brand evaluations. In many cases, brand evaluations will be based on past judgments rather than new information (see Lynch and Srull 1982). To the extent this is true, mood states at the time of encoding should have little effect.

The procedure of the experiment was similar to that used in the first study. Undergraduate students were first put into either a positive, neutral, or negative mood. They were then shown the same ad pertaining to the Mazda RX7 and given the same on-line processing instructions. Subjects were then dismissed and asked to return in 48 hours. At that time, all subjects were first put into a neutral mood and then asked to evaluate the product. At the end of the second session, subjects rated their self-knowledge of automobiles in relation to the rest of the population and a median split was used to identify "novice" and "expert" subjects. This procedure was adapted from that used by Johnson and Russo (1981).

It was predicted that mood at the time of encoding would have a strong effect on the judgments of novice subjects but not on those of expert subjects. The data for novices show clear support for the hypothesis. The mean product evaluation of novice subjects was 14.16 in the positive mood condition, 12.09 in the neutral mood condition, and 10.87 in the negative mood condition. The means in both mood conditions are displaced from their neutral baseline condition. Theoretically, this is due to the fact that subjects were forming their evaluations at the time they were experiencing the mood state.

The data for expert subjects are a little more ambiguous. Contrary to what was predicted, mood at the time of encoding did have a systematic effect. On the other hand, the size of this effect was much smaller than that found

with novice subjects. The mean product evaluation for experts was 14.24 in the positive mood condition, 14.17 in the neutral mood condition, and 14.03 in the negative mood condition. Relative to the novice condition, mood had the same type of effect but the magnitude of the differences was much smaller. Thus, qualified support for the more general model was obtained.

Experiment 4

The procedure of Experiment 4 was identical to that used in the last study with two exceptions. First, all subjects were put into a neutral mood at the time of encoding. Second, subjects were put into either a positive, neutral, or negative mood at the time of judgment. It was assumed that novice subjects would form their evaluations of the product at the time of input. Thus, when asked to make a specific judgment during the second session, they would simply retrieve the prior evaluation from memory. To the extent this is true, mood at the time of judgment should have no effect.

The prediction for expert subjects is more or less the same. These subjects should also not have to compute their evaluation at the time of judgment. Rather, one would expect that the judgment has already been formed and stored in memory. If this is true, one would expect that mood at the time of judgment would have no effect on the evaluations of expert subjects.

The data offer mixed support for both hypotheses. In both cases, mood at the time of judgment had a systematic effect but, in each case, the magnitude of the effect was very small. The mean product evaluation of novice subjects was 14.12 in the positive mood condition, 13.18 in the neutral mood condition, and 12.67 in the negative mood condition. One can see how small these effects are by comparing them to those obtained in Experiment 3.

The data from expert subjects are similar. The mean product evaluation for expert subjects was 14.63 in the positive mood condition, 14.08 in the neutral mood condition, and 13.76 in the negative mood condition. As in Experiment 3, mood had a systematic effect even though the model predicts otherwise. It is also true, however, that these effects are very small compared to those obtained in the previous experiments.

Discussion

As noted earlier, mood effects are sometimes thought to be outside the boundary conditions of information processing models. Such a conclusion is premature and certainly inconsistent with the data reported in the present paper. In fact, the present results suggest that at least some mood effects can be accounted for quite well in information processing terms. A reasonably simple model was developed and used to illustrate how specific a priori predictions pertaining to mood can be derived. Moreover, the effects reported in the present paper are quite similar to those obtained in many other paradigms. Thus, the generalizability of this approach would appear to be very promising.

Experiments 1 and 2 provided strong support for the model. The data from the last two experiments, both of which pertained to expert-novice differences, were a little more ambiguous. Strong and consistent mood effects were observed in each case the model predicted they would be. However, mood effects were also observed in several cases where the model suggests mood should not have an impact. It is useful to consider why the model broke down under these conditions.

The fact that these mood effects were so small offers some clue. One possibility is that the criterion used to classify subjects as "expert" was simply too liberal. Is it reasonable to assume that 50% of the population is expert in any given domain? If not, some "true novices" would have been classified as experts, and these misclassified subjects could have produced the small effects

that were observed. Consider Experiment 3 for example. If some of the subjects classified as experts were actually computing their evaluation at the time of encoding, the effects observed would not be surprising.

Another possibility is that the retrieval process attributed to experts is too simple to model their actual performance. As Logan and Cowan (1984) have pointed out, there may be a "race" between an algorithm that is used to process new information and an attempt to retrieve a prior evaluation. In most cases, the retrieval process will be faster and used to make the judgment. However, the algorithm may win the race in a small percentage of cases. This would also predict a mood effect, but one that is much smaller than that observed for novices.

A final possibility is that the judgment and translation assumptions are too simple. The prior evaluation that is retrieved by an expert is unlikely to be in the same form as that requested by the experimenter. Thus, it will need to be translated and mapped onto whatever particular scale is used. It is possible that mood has some effect on this mapping process.

All of these possibilities are viable and deserve to be explored in future research. Each of them provides a mechanism for providing a fuller account of the data. The model will certainly become more complex as a result. However, this is not too surprising since only very simple processing assumptions were made to begin with.

The more general point is that information processing approaches to studying mood should not be dismissed prematurely. Accounting for affective processes is a definite challenge. But it is a challenge that must be met. Even if such models are ultimately rejected, we are sure to learn a great deal in the process of exploring their implications.

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THE BUYING PROCESS: EFFECTS OF AND ON CONSUMER MOOD STATES

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Abstract

In recent years, academic researchers have begun to investigate the impact of affective variables on consumer behavior. Much of this activity has focused on the mediating role of mood states and their potential importance for understanding the recall of information, evaluation during decision making, and behavior (Gardner 1985). The purpose of this paper is to look at the mood literature and how it has developed to date. After this brief review is completed, an organizational framework for this literature will be suggested and future research directions will be delineated.

Literature Review

Reviews by Isen (1984) and Gardner (1985) provide insights into the current way the mood literature is organized. Isen concentrated her review on recall, attitude formation and helping behavior. In an attempt to extrapolate from the psychological literature to marketing, Gardner reviewed the research in psychology that investigated the impact of mood states on behavior, judgement, and recall. Her conclusions suggested that:

1. Mood states upon exposure to and retrieval of information may affect an individual's ability to recall the information.
2. Mood states may bias judgements in mood congruent directions since mood-congruent items are more accessible from memory.
3. Positive moods increase the probability that individuals will engage in behaviors with expected positive outcomes, and decrease the probability that individuals will engage in behaviors with expected negative outcomes.
4. Positive moods may increase the likelihood that positive associations to a particular behavior will be accessible in memory, and, therefore, increase the probability that the behavior will be performed.

The consequences of these mood effects were applied to three marketing contexts: service encounters, point-of-purchase stimuli, and marketing communications.

Both of these reviews have contributed to our general understanding of the relationship of mood to consumer behavior. However, neither approach is organized in a way that suggests the full range of potential effects of mood on consumers' reactions in the marketplace. Therefore, we suggest that the literature be evaluated utilizing a programmatic approach that explicitly considers the dynamic and interactive nature of consumer behavior. Specifically, we recommend that an investigation of the current research and future opportunities in mood be evaluated through a look at what has been done to improve our understanding of each stage of the buying process. A brief review follows that will begin to stimulate thought in this direction.

Mood and the Buying Process

The reviews discussed above suggest that the effects of mood on the buying process are quite pervasive. Mood may affect different factors at different stages of the buying process. Further, recent research by Gardner and Hill (1986) demonstrates that mood states have an impact on and are impacted by consumers' activities during the buying process. With this perspective in mind, each stage of the

buying process will be examined, focussing on mood effects, examples of current research, and future research opportunities.

Need Recognition

Individuals have a number of utilitarian and emotional needs that they attempt to fulfill through purchasing activities. An example comes from the work of Rook (1986), who found that consumers engage in impulse buying to acquire the things that they desire (utilitarian need) and to feel good or transform a negative mood state (emotional need). Berneman and Heeler (1986) found that shoppers compensate for negative mood states and complement positive mood states through shopping activities.

These studies suggest that consumers' current mood states may be one of their primary motivations for participating in the buying process. Further, they imply that consumers may begin the buying process in an attempt to "manage" their prevailing moods. If this is the case, consumers may consciously or unconsciously attempt to extend a positive mood or transform a negative mood through the evaluation, purchase, utilization and/or disposition of products.

There are several issues that researchers interested in need recognition might investigate. First, we might consider the nature of the moods that trigger the start of the buying process. For example, do consumers look for purchasing to impact their levels of happiness, anxiety, depression, and/or joy? Second, we need to consider the extent to which the search for emotional gratification is pursued consciously or unconsciously. If the search is primarily unconscious, consumers may be more easily manipulated by other actors in their decision environments. Third, we should investigate marketers' ability to influence affective need recognition. The recent research involving attitude toward the ad suggests that marketers have a broad influence over consumers' mood states. If this is true, it will have important implications for marketers in the use of promotional cues in advertisements.

Product Evaluation

Recent evidence demonstrates that the traditional view of consumers' evaluation processes is incomplete (Holbrook 1985). According to this new perspective, affective states play an integral role during decision making. For example, Isen and Means (1983) found that subjects in a positive mood made faster decisions, evaluated fewer product attributes, looked at less total information, and were less likely to request an additional look at bits of information than controls. Hill (1986) found that anxiety (a negative mood state) existed in a curvilinear relationship with decision time, amount of information utilized, and the processing mode selected. In other words, moderate levels of anxiety had a "motivational" effect on decision making. Further, Gardner and Hill (1986) found that different mood states (positive versus negative) led subjects to select distinct brand choice strategies.

These studies suggest that mood states have an important impact upon the nature of information utilization and evaluation during decision making. Future research should investigate the differential effects across and within positive and negative mood states on decision making. For example, are the effects of anxiety on product evaluations different from anger or depression? Also, we should begin to consider the impact of the decision process on mood

states. Is the process of decision making capable of enhancing, extending, or transforming a consumer's mood state? Finally, we should consider the impact of marketer-induced moods upon product evaluations. If marketers manipulate mood, will they improve or reduce the likelihood that consumers will use the information contained in their communications?

Product Purchase

Consumers' mood states may impact what is purchased and how much is purchased. Evidence presented by Berneman and Heeler (1986) suggests that shopping for clothing is often used by consumers to reinforce a positive mood or to counteract a negative mood. Gardner and Hill (1986) found a relationship between mood states, processing style, and product category selected for evaluation by consumers. Further, Rook and Gardner (1986) have demonstrated that a consumer's mood impacts the amount of money spent on impulse purchases.

Taken together, these studies infer that consumer mood states impact the process as well as the content of product evaluations. Future research should begin to evaluate the mood-related conditions that cause certain product categories to come under evaluation. This information would have important implications for marketers who utilize a number of different mood-inducing communications in an attempt to stimulate consideration of their brands. Also, research should investigate the impact of different mood states on the quantity of products purchased by consumers. Much of this research should focus on consumers' resulting quality of life.

Product Consumption

Recent discussions in the consumer behavior literature describe a new orientation termed hedonic consumption (Hirschman and Holbrook 1982, Holbrook and Hirschman 1982). This perspective suggests the following propositions:

- (1) Emotional desires may dominate utilitarian motives in the choice of products;
- (2) Consumers imbue a product with subjective meaning that supplements the concrete attributes it possesses;
- (3) Hedonic consumption is tied to imaginative constructions of reality.

The basis of this approach is that the search for emotional desires is an important motivation for individuals when consuming products. However, the concept of hedonic consumption implies that consumers search for positive emotional gratification. Recent evidence by DePaulo (1985) suggests that many of the products we consume for emotional reasons may lead to a form of "addiction" that might have long-term negative consequences on mental and physical health.

Future research should begin to establish whether there is a link between emotions sought and the actual mood during consumption. Evidence from the mental health literature implies that mood states may vary over the course of mood-stimulated behaviors (Pansau 1984). Consumer researchers should determine whether this is true of consumption experiences and whether these mood changes are consistent with the consumer's emotional needs. Also, these studies should evaluate the impact of different positive and negative mood states on the characteristics of the consumption experience (e.g., the amount, timing, and speed of consumption). The results from these investigations may have important implications for subpopulations such as teenagers and the elderly.

Post-Consumption Stage

Most of the consumer behavior literature involving the post-consumption stage concentrates on the determinants of satisfaction (Barber and Venkatraman 1986). These approaches are concerned with whether or not consumer expectations are confirmed or disconfirmed through the consumption experience. However, the focus of this perspective is on utilitarian needs to the exclusion of affective requirements.

There is a great need to determine the extent to which consumer satisfaction is a function of satisfaction with emotional as well as utilitarian needs. As described earlier, consumers may engage in the buying process for the purpose of enhancing or extending positive mood states, or transforming negative mood states. The degree to which they are successful may have an important impact upon resulting satisfaction levels. Also, DePaulo (1986) states that there are circumstances under which consumption can lead to an increase in the need to consume (a "priming" effect). This implies that some consumers may be in a cycle of continuous need for emotional gratification leading to consumption levels that may be unhealthy. Research investigating the possibility of "emotional" addiction to products is needed.

Discussion

This paper suggests that there is a need to organize the current literature in mood so that future research needs and opportunities can be identified. To this end, we recommend that the stages in the buying process be utilized in an attempt to organize these studies. Further, several general recommendations can be made. First, there is a need to consider the differential effects of mood within and across positive and negative mood states on the buying process. Second, researchers should begin to look at mood as a determinant as well as a result of various stages and activities in the buying process. Third, an attempt should be made to determine the extent to which consumers are aware of their mood-related needs and desires, and whether they consciously or unconsciously utilize the buying process to manage their mood states. Successful studies investigating these issues will greatly enhance our understanding in this area of inquiry.

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COMMENT ON CLASSICALLY CONDITIONING HUMAN CONSUMERS

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Abstract

The assumptions underlying recent articles advocating attention by consumer behavior scholars to classical conditioning theory are examined. The advocacy is viewed as unjustified because it relies heavily on animal studies that use organisms whose cognitive processes differ from normal humans and because conditioning theorists have yet to address adequately the thorny problem of awareness. Conditioning research should routinely assess awareness of human subjects. To date studies observing this criterion have not supported classical conditioning theory as useful in consumer research.

Introduction

In 1974 Brewer suggested that there is no convincing evidence of the classical conditioning of normal human adults. He believed that no experiment had to date unambiguously demonstrated that normal human adults are classically conditioned without awareness, as conditioning theory requires. Although in marketing some authors question the importance of conditioning theory (e.g., Assael 1984), one recent review of classical conditioning written for marketers (McSweeney and Bierley 1984), which implied that normal human adults can be conditioned, presented an especially sophisticated analysis of the controversy over the viability of classical conditioning from the perspective of a conditioning proponent. Because these authors clearly had a better understanding and explanation of the issues involved than some conditioning proponents, a comment from an alternative perspective may be warranted.

Awareness in the conditioning paradigm implies that research participants grasp the nature of the hypotheses of the study in which they are participating. Aware subjects frequently behave in such a way as to comply with these demand characteristics of the experiment in order to make themselves and the experimenter look good.

Proponents of classical conditioning theory frequently insist on discounting or trivializing the controversy over the role of awareness and demand characteristics in the classical conditioning experiment. They often argue that we ought to ignore this "counterproductive" controversy, in order to use our time more efficiently on worthwhile tasks, such as increasing our understanding of other aspects of classical conditioning (cf. McSweeney and Bierley 1984). Yet the controversy over classical conditioning and demand characteristics is neither trivial nor theoretically unimportant, and it ought to be resolved, if possible, before any further attempts to elaborate conditioning theories proceed.

Historic Context of Classical Conditioning

A few notes on history may help to put the current controversy into an interpretable context. Classical conditioning theory grew from the work of Pavlov and especially J. B. Watson, in part as a response to the excesses of introspectionists in the early twentieth century. Many of the introspectionist propositions were not amenable to scientific investigation, and the conditioning theorists sought to rectify this weakness by insisting on the use of behavior, which is readily observable, as the fundamental fact of social science. At that time the objectification of social science was an important and valuable contribution of conditioning theorists. Conditioning theory and behaviorism grew together, inextricably intertwined as a methodological and theoretical approach to the objectification of social science.

When Staats and Staats (1957) articulated the relevance of classical conditioning for attitudes and human social behavior in their classic article on the topic, it was no accident that they insisted, "The meaning of stimuli may be learned without awareness--without cognition" (Staats and Staats 1957, p. 76). Awareness and cognition by definition have no role in the science of behavior in this view. By insisting on the irrelevance of cognition and awareness, Staats and Staats were making a pointed statement to their colleagues in social psychology, who at the time seemed infatuated with cognitive approaches, such as balance theory (Heider 1958), cognitive dissonance theory (Festinger 1957), and a host of similar explications of the function of cognition by such social scientists as Cartwright and Harary, Newcomb, and Osgood and Tannenbaum (cf. Kahle 1984). To study anything besides behavior, in Staats and Staats' view, is to compromise science in much the same way as the earlier introspectionists. The Staats and Staats theory of conditioning may be the most useful to marketing because it carefully considers the nature of higher order conditioning and the relationship between attitudes and conditioning.

This view of Staats and Staats on awareness was not an extreme view among conditioning theorists. It was rather an orthodoxy inseparable from the most fundamental tenants of the theory. Thus, when authors such as Cohen (1964) and Page (1969) proposed that awareness and experimental demand characteristics provide an alternative explanation to the results of conditioning experiments, classical conditioning proponents quickly rallied to attempt to disprove and discount what in their view was an apparent throwback to earlier theoretical days. Awareness presents a potential methodological problem for all types of deception research conducted on adult human subjects, but it is a key issue in classical conditioning studies because awareness is a theoretical issue as well.

The issue addressed here is perhaps the most fundamental question of social science--namely, what is social science to study. Is the fundamental fact of social science behavior or cognition? Can future actions be best predicted from previous behavior, as behaviorists maintain, or does some cognitive factor, such as intention (cf. Fishbein and Ajzen 1975), better illuminate future actions? If behavior is not a sufficient and complete topic for investigation, then classical conditioning theory is inadequate in its account of social behavior because the most basic premise of classical behaviorism is undermined. "Cognitive classical conditioning" is an inherently contradictory phrase because what distinguishes classical conditioning theory from numerous other theoretical accounts of the consequences of pairing events (e.g., Kahle 1984) is its insistence on behavior as the fundamental fact of social science.

The Empirical Evidence From Psychology

Numerous studies have demonstrated that among normal human adults the empirical phenomenon of classical conditioning only occurs when subjects are cognitively aware (e.g., Cohen 1964; Page 1969). Typically, these studies measure awareness immediately after measuring evidence of conditioning, and it is demonstrated that "conditioned" subjects knew the hypothesis of the experiment and complied with it. Aware subjects often view these experiments as problem-solving studies, in which their task is to figure out that the experimenter wants them to like certain words.

Proponents of conditioning have criticized these experiments because the measures of awareness are often rel-

atively long, "funnel-type" questionnaires, but these questionnaires have been shown to be more valid (e.g., Page 1971, 1973) than the shorter, two-item questionnaires proponents of conditioning utilize. The two-item questionnaires ("Write down anything you thought during the experiment" and "What was the purpose of this experiment?") often generate weak or irrelevant data (e.g., "I thought about the girl sitting next to me and about my test this afternoon" and "The purpose was for me to get research participation credit and for the experimenter to get a publication"). Some sophisticated subjects furthermore know that they are not "supposed to" give the true purpose of the experiment on the post-experimental questionnaire, although they do know the purpose. Orne (1962) has called this the "pact of ignorance" between the experimenter and the sophisticated subject. Hence, it is necessary to have the longer, funnel-type questionnaire that starts with abstract questions ("Write down anything you thought during the experiment") and uses a series of questions that lead to a specific inquiry about the purpose of this study.

Proponents of conditioning have also criticized these experiments as "correlational," pointing out that in some instances correlation is not causation. This argument is quite weak as evidence for classical conditioning, however, because conditioning theorists predict no correlation between awareness and behavior where one is observed. Correlational studies such as these provide necessary but not sufficient evidence for the cognitive interpretation of conditioning experiments and may thus be criticized. But they clearly provide necessary and sufficient falsification for the conditioning interpretation; hence, their "noncausal" nature hardly supports conditioning theory.

Several true experiments also have addressed the issues of classical conditioning and demand awareness using evidence that should be acceptable to behaviorists. Page (1974), for example, "conditioned" subjects and then, just prior to measuring attitudes, told subjects to do the opposite of what they were supposed to do if they knew of the experimenter's hypothesis. Compared to a normal conditioning experiment, Page found a mirror image of the normal bi-modal distribution of subjects. Instead of a mode of aware subjects with scores in the direction of the experimental conditioning, Page found a mode of subjects with scores in the opposite direction of the conditioning theory prediction. (The second mode consists of unconditioned or unaware subjects.) Evidently, some subjects did know what they were supposed to do and did it, while other subjects were neither aware nor "conditioned." The mere existence of a bi-modal distribution in conditioning experiments is difficult to explain from conditioning theory, but the mobility of the "conditioned" mode due to a minor experimental manipulation is clearly contrary to conditioning theory.

Kahle and Page (1976) also carried out a true experiment that provides evidence interpretable within the cognitive but not conditioning framework. They replicated a study by Staats, Minke, Martin, and Higa (1972), which had been offered as evidence of the "physiological" (i.e., non-cognitive) nature of classically conditioning attitudes. Staats et al. showed nonsense syllables paired with food words to subjects who either were or were not hungry. Hungry subjects liked the nonsense syllables better than did full subjects, and Staats et al. interpreted these data as evidence of the physiological basis of attitude conditioning. Kahle and Page held physiology, the crucial conditioning variable, constant by using only food-satiated subjects. They preserved the demand characteristics of the original study by telling half of the subjects to pretend to be hungry. "Conditioning" was just as effective among subjects who were exposed to the demand characteristic of the Staats et al. study but lacked the crucial-for-conditioning physiological difference. Page and Kahle (1976) also demonstrated that the Staats et al. paradigm only works with subjects who have already learned about classical conditioning in their psychology classes. The cognitive interpretation of both of these studies is that knowledge of the experimenter's goals facilitates "conditioning" of normal human adults, but the conditioning

interpretation is not apparent.

Much of the more recent literature in psychology has built on the base of assuming that awareness undermines classical conditioning explanations of the empirical phenomenon under consideration here (e.g., Baumrind 1985; Cahoon and Edmonds 1984; Carlopio, Adair, Lindsay and Spinner 1983; Dawson, Schell, Beers and Kelly 1982; Dulany, Carlson, and Dewey 1985; Perruchet 1985; Reardon and Katz 1983).

The Empirical Evidence From the Animal Kingdom

The question of what subjects to use also enters into this debate. Do animals represent a legitimate topic of study in consumer behavior? Certainly for some topics where animals do influence consumer choices (e.g., dog food), animals should be studied. And animals should be studied when problems and processes between animals and humans are quite similar and practical or ethical considerations restrict human research (e.g., research regarding a product's carcinogenic potential). Furthermore, animal research is interesting and valuable in its own right, regardless of its implications for consumer behavior. For example, we would support and encourage a biologist who wants to know why pigeons peck or how whales communicate.

But studying animals to learn about human consumer behavior per se necessarily relies on analogy. Animals differ from humans in many respects: Animals cannot imagine, symbolize, or plan in the same manner as humans. Humans can cognitively override even basic physiological processes, as in anorexia nervosa. Humans differ from animals in culture, customs, and, of course, genetics. The basic anatomy of information processing in humans is unique. Thus, the burden of proving the analogy from animal behavior to human consumer behavior is always on the researcher, and in the area of classical conditioning ample evidence shows that the analogy is invalid.

McSweeney and Bierley (1984) find it not "intuitively appealing" to assume that the behavior of animals and humans differ, but we disagree. To us it seems, on the contrary, intuitively obvious that the consumer behaviors of humans and, say, goldfish (cf. Bitterman 1964, a study McSweeney and Bierley cite) do differ. Philosophers of science even have a name, anthropomorphism, for the logical fallacy of assuming that nonhumans have human characteristics. In a discipline where research resources are precious and where some critics question the appropriateness of research on even the venerable college sophomore, the intuitive appeal of consumer research on goldfish, dogs, sheep, rats, rabbits, goats, and pigeons may not be universally obvious. Yet virtually all of the empirical studies cited by McSweeney and Bierley rely on these non-human organisms, with a strong preference for rats and pigeons.

The Empirical Evidence in Consumer Behavior

The most cited study of classically conditioning normal human consumers (Gorn 1982) paired music with a slide of a pen once and then found that people selected the pen more if the music had been pleasant than unpleasant. This study failed to employ the "funnel-type" postexperimental questionnaire (Page 1973) that has been shown to be more valid at assessing demand awareness.

Another human study (Milliman 1982) has also been interpreted as providing evidence of classical conditioning, although its author made no reference to classical conditioning. In that study, fast versus slow background music related to total store sales, although a lack of music did not differ from either of the other conditions. Milliman just barely detected a significant difference ($p = .05$) using all data from all shoppers in a store between January 28 and March 31 and using an optimally powerful statistical procedure (ANOVA). With a less powerful statistic (Chi Square) and a tiny subset of subjects, the tendency toward awareness, measured with only one item, failed to attain statistical significance. We do not know

whether a more comprehensive sampling technique, a more valid measure of awareness, and a more powerful data gathering and statistical procedure would have changed the inference that awareness did not influence the outcome of this study, but these features would have been necessary had the author sought to prove classical conditioning. This study is interesting and contributes to the consumer behavior literature, but it does not provide compelling evidence for classical conditioning (nor does Milliman make such a claim). A variety of theoretical accounts can explain the roles of mood and emotion in human behavior (cf. Dienstbier 1979). For example, social adaptation theory (Kahle 1984) maintains that situational and cognitive factors interact in determining behavior. Behavior is more related to adaptation than to conditioning in this view.

Allen and Madden (1985) clearly did use an appropriate funnel-type postexperimental questionnaire in an attempted conceptual replication of Gorn (1982). This conceptual replication failed to replicate Gorn on parallel dependent variables. Interestingly, Allen and Madden report that on a unique dependent variable--subjects' willingness to sell back a pen they had been "conditioned" to select--conditioning without awareness did occur. Unfortunately, conditioning did not occur for pen selection, calling into question the mediation process. The authors report the probability level associated with their inference but do not detail how they computed it. In any event, the authors proceed to articulate an interesting position that is quite different from traditional classical conditioning theory. At this time insufficient data testing their theory have been presented either to endorse or reject it.

Conclusion

In conclusion, it appears that the data have not yet come forth to contradict Brewer's (1974) claim that there is no convincing evidence of classical conditioning in normal human adults. The impact of classical conditioning theory has been particularly important in consumer behavior, perhaps because when J. B. Watson left psychology for the field of advertising, he brought with him his psychological and conditioning expertise. But now empirical studies on conditioning adult humans seem less useful because other theoretical approaches, which view human behavior as motivationally and cognitively more complex, appear more fruitful (e.g., Kahle 1984). Dawson, Schell, Beers, and Kelly (1982) take essentially the same perspective as the present review--that awareness is a persisting problem in classical conditioning research. If nearly a century of research has not produced the convincing evidence of classical conditioning sought by Brewer, perhaps researchers should study new topics.

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OBSERVATIONS ON AWARENESS AND CONDITIONING

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Abstract

In these comments we will attempt to make two points. First, there are several types of awareness. Each type may, but does not necessarily, play a role in classical conditioning. Second, there is at least one clear case where awareness is not necessary for classical conditioning.

Introduction

Although we cannot deal with all of the issues surrounding awareness and conditioning, we would like to consider two issues. Both issues relate to the key question of the role of awareness in conditioning. The first issue concerns the meaning of the term awareness. We hope to make clear that there are many kinds of awareness. If the role of awareness in conditioning, and in human behavior in general, is to be understood, there is a need to decide what we mean by the term awareness. The second issue concerns the claim that there is no empirical evidence in the conditioning literature that people's behavior can be influenced without their awareness. We hope to make it clear that this is not the case.

Awareness

Types of Awareness

We can distinguish two basic types of awareness. The first can be called self-awareness. One form of self-awareness is the knowledge of how one's behavior is influenced by the environment; in a Pavlovian conditioning paradigm, this means that the subject is aware that he or she has acquired and is performing a conditional response because of an acknowledged relationship between a conditional and unconditional stimulus.

This type of self-awareness is related to, but distinct from, a second basic type of awareness: External awareness. One form of external awareness in Pavlovian conditioning experiments, implicit in the example given above, is an awareness of the relationship between the conditional and the unconditional stimuli, two elements in the environment. This form of awareness is called contingency awareness (Page 1973), something quite distinct from self-awareness where the causal link between the conditional-unconditional stimulus association and the conditional response is known.

An awareness of the relationship between the conditional and the unconditional stimuli may lead to another form of external awareness: awareness of the experimental hypothesis. This is called demand awareness (Page 1973). Of the various types of awareness, demand awareness is the most relevant to the present discussion because its presence in a conditioning experiment casts doubt on whether any real conditioning has occurred. Focusing on demand awareness, Kahle, Beatty and Kennedy (1987), Brewer (1974), and Page (1973) have argued that Pavlovian conditioning procedures do not produce any real conditioning of adult human behavior: Behavioral change is merely a by-product of demand awareness. The argument is that behavioral changes seen in subjects following conditioning result from the subjects developing contingency awareness, then ascertaining what kind of behavioral change the experimenter wants to see, and then acting cooperatively.

Assessing Demand Awareness

We have begun a series of pilot studies designed to assess the validity of the type of questionnaires typically used to assess demand awareness in the conditioning paradigm (e.g., Page 1973). In our studies, the subjects are not subjected to a conditioning procedure of any kind. They are simply given a general description of the experimental paradigm used by Page, without any reference to the relationship between the conditional stimulus and the unconditional stimulus. They are asked to imagine that they were subjects in the experiment, and then asked to fill out the postexperimental, funnel-type questionnaire used by Page to assess awareness in his experiment. Although space does not permit us to describe all of the conditions that we are testing, the subjects in a critical group that we have run, received two pieces of information: 1) a description of the pattern of their hypothetical responses in the experiment, based upon the responses that would be expected from a conditioned subject in Page's (1973) experiment; and 2) the cues that are contained in the questionnaire itself. In this group, 63% of the subjects indicated some awareness of the experimental hypothesis, with 33% of the subjects indicating both contingency and demand awareness. These results contrasted sharply with those of a group that were not provided with the information concerning their "responses" in the imaginary experiment. There was little evidence of any type of awareness in these subjects. These results indicate that subjects who respond to questionnaires as though they are demand aware (e.g., Page 1973) may be led to this "awareness" by analyzing the questions in terms of their behavior in the experimental situation. At best, the funnel-type questionnaire provides evidence of a correlational, not causal, relationship between awareness and conditioning. Awareness may accompany, or follow, conditioning in an attribution sense, rather than cause it.

Evidence of Conditioning Without Awareness

At this point, our discussion turns to the second issue, which concerns the claim that there is no empirical evidence of conditioning in adult humans without awareness (Kahle et al. 1987). In the psychological literature, there is clear evidence that Pavlovian conditioning can affect the behavior of adult humans without their awareness of any experimental hypothesis, without their awareness of the relationship between the conditional and the unconditional stimuli, and without their cooperation. We will present an example that we find particularly compelling because it is from real life; there is no experimenter or experimental situation to generate demand.

People who have cancer are often treated with chemotherapy or radiation therapy. Although such therapies kill cancer cells, they have two unfortunate side effects. First, they make the patient ill. Second, they gradually make the patient anorexic; that is, the patient stops eating food. This loss of appetite leads to dramatic weight loss and other problems associated with undereating. This aversion to food develops slowly over the course of the therapy and often lasts well after the therapy is finished. Although medical doctors had known for many years that chemotherapy and radiation therapy produce illness in patients, they had not been able to ascertain why their patients gradually stopped eating, especially when the foods had often been long-time favorites before therapy began.

The answer to this puzzling and unfortunate problem was provided by psychologists familiar with a phenomenon from the area of animal learning that is referred to as

conditioned taste aversion. This phenomenon was first reported by John Garcia and his colleagues who were interested in the toxic effects of radiation (Garcia and Koelling, 1966). Garcia noted that, after a bout of radiation, rats avoid any novel foods that they had tasted before the toxic bout, even if these foods were particularly appealing ones (e.g., sugar solutions). Further research on the phenomenon of conditioned taste aversion in the rat revealed a number of interesting facts: 1) if a familiar tasting food is paired with illness, rats do not avoid that food after a single pairing but come to avoid it with repeated pairings (Riley, Jacobs, and Mastropaolo 1983); 2) the taste and the illness do not have to be closely paired in time. Conditioned taste aversions can be acquired even when a period of many hours intervenes between the food and the illness (e.g., Nachman and Jones 1974); 3) this conditioned aversion is very stimulus-specific; even when other stimuli (e.g., tones or lights) signal the impending nausea in the conditioning trials, the taste of the food alone is subsequently avoided (Garcia and Koelling 1966).

With this knowledge, an explanation based on conditioned taste aversions has been proposed for the anorexia produced by chemotherapy and radiation therapy (e.g., Garb & Stunkard 1974; Bernstein 1985). According to this explanation, cancer patients who eat just before a therapy session gradually lose their appetite for a particular food because that food is repeatedly paired with the nausea resulting from radiation or chemotherapy. This aversion can develop even if the food is eaten many hours before the therapy. Moreover, the taste aversion develops even if other stimuli are present before and during the periods of therapy.

Once patients have developed an aversion to a particular food, they quite naturally eat other foods, ones to which the aversion has not yet developed. Of course, an aversion eventually develops to these foods. This cycle is repeated until the patients eventually eat very little food at all.

This explanation has been supported by a number of studies that used cancer patients as subjects (e.g., Bernstein & Webster 1980; see Logue 1985, for reports of conditioned taste aversions in other human populations). It is important to note that the subjects in these studies were typically unaware that it was the pairing of the taste of the food and the illness suffered during therapy which caused the food aversion (e.g., Logue 1985). In addition, even when cancer patients recognize that the source of their illness is the drug therapy they have received, and not the food they have eaten, they continue to demonstrate a robust conditioned taste aversion. This form of conditioning therefore appears highly resistant to cognitive control (c.f., Bernstein 1985).

This example illustrates three things. First, that without the knowledge of the animal conditioning literature, the cause of anorexia in patients receiving chemotherapy and radiation therapy might have remained undiscovered. Second, although much of the literature indicates that some form of awareness is present in classical conditioning, it is clear that conditioning can occur, at least in this instance, without awareness of the conditional-unconditional stimulus contingency on the part of the subject, or of any "demand" created by the person controlling the presentation of the conditional and unconditional stimuli. Third, conditioning can persist even when a person recognizes both the basis and negative consequences of that conditioning.

Regardless of one's position on the role of awareness in the conditioning of human behavior, the conditioning paradigm should not be discarded simply because it does not fit our intuitions about the causes and control of human behavior. A conditioning perspective raises different questions than other perspectives, or at least asks them in a different way. Conditioning research has undoubtedly been useful in explaining, and in providing

techniques to modify, human behavior, e.g., operant conditioning in the development of behavior modification, classical conditioning in the development of desensitization therapy and in the phenomenon of conditioned taste aversion that we have discussed. A conditioning perspective has also stimulated interest in alternatives to Fishbein's classic theory of reasoned action and its implications for communication effects (e.g. Mitchell and Olson 1981). Conditioning work may well be related to consumer behavior. After all, much of it deals with food likes and dislikes.

In conclusion we do not feel the evidence warrants a rejection of the conditioning paradigm as an additional paradigm for exploring consumer behavior. The effects of conditioning procedures continue to be a source of considerable interest in the field of psychology. The literature is a rich one awaiting further exploration by consumer researchers. Judging from the interest expressed at this conference, and the recent interest in conditioning in the consumer behavior literature, it is apparent that this exploration will continue.

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THE SELF-REFERENCE EFFECT IN PERSUASION IMPLICATIONS FOR MARKETING STRATEGY

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Abstract

The role of the self in information processing and persuasion is reviewed. The ways in which social psychologists and consumer researchers have operationalized self-referencing are discussed in terms of present and potential marketing strategies. It is suggested that the effectiveness of many strategies that marketers use intuitively can be explained by the self-reference effect. Methods for testing the effectiveness of persuasion strategies based on self-referencing are offered.

Introduction

Consumer researchers and social psychologists have provided evidence that the "self", specifically the way individuals perceive themselves, is an important determinant of their perceptions, attitudes, and behavior. The behavioral compliance strategies of labeling, foot-in-the-door, and door-in-the-face, for example, are based on the premise that the self influences individuals' processing of incoming information and, thus, the outcome of attempts to persuade them.

Since 1977, many researchers have been studying the "self-reference effect", that is, the impact of self-referent judgments on recall (Bower and Gilligan 1979; Keenan and Baillet 1980; Kendzierski 1980; Kuiper and Rogers 1979; Rogers, Kuiper, and Kirker 1977), attitudes (Shavitt and Brock 1985; Yalch and Sternthal 1985), and ultimately, on persuasion. The purpose of this paper is to examine self-referencing in information processing and persuasion--its theoretical basis, how the effect has been operationalized and measured, and what implications this research might hold for marketing strategy. Both existing and potential uses of the self-reference effect are discussed.

Background

Self-referencing has been described as a cognitive process whereby individuals associate self-relevant incoming information with information previously stored in memory (one's self-concept) in order to give the new information meaning (Bellezza 1981, 1984; Kuiper and Rogers 1979; Markus 1977, 1980; Rogers 1981). In a marketing context, a target audience may be motivated to relate an advertising message to personal information stored within the structure of the self-concept (Yalch and Sternthal 1985). Individuals who self-reference information are more likely to remember that information (it becomes meaningful to them) and respond to it in a favorable way. Studies have documented that self-referencing results in enhanced recall, learning, and memory (Bellezza 1981, 1984; Bower and Gilligan 1979; Keenan and Baillet 1980; Kendzierski 1980; Kuiper and Rogers 1979; Lord 1980; Rogers et al. 1977), each of which is important in marketing communications.

The self-reference effect has been traced to theories of the self structure in memory. The self is thought to represent an elaborate and organized network of associations in memory (Bower and Gilligan 1979; Greenwald 1981; Greenwald and Pratkanis 1985; Markus 1977, 1980; Rogers et al. 1977). Consequently, it affects the encoding and retrieval of relevant stimulus information and potentially individuals' evaluative judgments in a persuasion context (Cacioppo and Petty 1979).

The self has been described by Markus (1977, 1980) as a schema which affects one's judgments and memory. It provides meaning to incoming stimuli if those stimuli fit one's knowledge structures in memory. Markus classified

individuals as schematic for a trait (if the trait was judged as self-descriptive) or aschematic (if it was not) and found that schematics made self-relevant trait judgments more rapidly than aschematics. Schematics also made judgments on relevant traits faster than judgments on irrelevant traits. Lord (1980) acknowledges that individuals have many schemas in memory but that the self is the most easily remembered one because it has the most complex structure.

In addition to the self's cognitive component, Rogers (1981) suggests that the self also has an evaluative or affective component which plays a role in the encoding of personal information. He feels the self-referencing process has an emotional quality which the cognitive model overlooks and attributes enhanced memory of self-referenced information to both the cognitive and affective components of the self.

The next section describes how self-referencing has been operationalized in an advertising context. A review of self-referencing manipulations in social psychology studies follows with suggestions as to how these manipulations might be useful in devising marketing strategies (or how they relate to strategies marketers already use, intuitively).

The Self-Reference Effect in Persuasion

A limited amount of self-referencing research has been conducted in a marketing-related context. Most noteworthy are studies in which researchers have attempted to induce self-referencing within the framework of advertising. Shavitt and Brock (1984) experimentally manipulated individuals' degree of "self-relevant responding" in a television commercial. Their goal was to establish the causal role of self-thoughts on persuasion. Subjects were exposed to one of three conditions: a self-relevance condition in which they were instructed to relate the advertisement to their own experiences, a message-recall condition in which they were told to remember what they would see in the ad, and a control condition where they were told only to view the ad. These instructions were edited onto the tape of the commercial itself. The degree of self-relevant responding in each condition was assessed by examining subjects' cognitive responses. Results of the experiment showed that subjects in the self-relevance condition elicited more self-originated thoughts and more thoughts focusing on the self as target than subjects in the message-recall condition (of which the intent was to suppress self-originated thinking), but not more than subjects in the control condition. The difference in the magnitude of self-thoughts between the self-relevance condition and the message-recall condition suggests that self-originated thoughts play a causal role in persuasion. The lack of significance between the self-relevance and control conditions supports the notion that self thoughts occur spontaneously. The authors also measured subjects' attitudes toward the message and brand, and their behavior. Surprisingly, subjects' attitudes and behavior were somewhat less positive in the self-reference condition than in the other conditions. This implies that respondents in the self-reference condition elicited refutational thoughts that inhibited persuasion and thus suggests that advertisers should examine the content of message-related thoughts. The self-referencing strategy did, however, increase the consistency between subjects' attitudes and behavior.

Self-referencing strategies were tested again in a marketing context by Yalch and Sternthal (1985). The

effectiveness of two alternate strategies was examined relative to a control group of subjects who simply listened to a radio commercial for a new beverage. Self-referencing was operationalized by the experimenter who either (1) instructed subjects to relate what they would hear "to their own experiences and to themselves" (instruction condition), (2) labeled subjects as being more concerned about the flavor of a beverage than others who previously participated in the research (label condition), or (3) administered both the instructions and a label. After listening to the commercial, participants recorded their cognitive responses and evaluated the taste of the product. They also had the opportunity to drink as much of the beverage as they desired (a behavioral measure). The cognitive response results showed that subjects had fewer negative taste thoughts in the instruction and label conditions individually than in the other conditions (also implying fewer self-associations since the message delivered only positive taste information). Subjects' objective evaluation of the taste of the product was more positive in the instruction and label conditions individually than in the other conditions (also implying fewer self-associations since the message delivered only positive taste information). Subjects' objective evaluation of the taste of the product was more positive in the instruction and label conditions individually than in the joint condition and somewhat more favorable than in the control condition.

As a result of the limited effectiveness of their self-referencing strategies, the authors conducted a second experiment in which they added a treatment condition and measured subjects' evaluations of the nutritional value of the product rather than its taste. In the added treatment condition, subjects were instructed to listen to the commercial and "try to create a detailed mental picture that includes yourself and what is being said in the commercial" (self-focused instructions). The nutritional value of the product was judged more favorable among individuals in the instruction condition than among those in the control, joint, or self-focused instruction condition. The cognitive response results also supported this finding. Subjects in the instruction condition had more favorable nutrition-related thoughts than those in the control, joint, and self-focused instruction conditions. The authors concluded that subjects in the instruction self-referencing condition linked the information in the message to themselves, while those in the other groups did not. They suggest that the other strategies disrupted individuals' processing of the nutritional information in the message, in some cases, because people simply focused on themselves.

Implications for Marketing Strategy

While much of the early self-referencing work in social psychology involved exposing subjects to trait words and measuring their recall given varying operationalizations of self-referencing, and may not at first glance appear relevant, it is our contention that this work provides a basis for assessing present communications-related strategies and for devising new ones. Advertisers, after all, are interested in enhancing the level of recall and recognition their advertisements generate. At times self-referencing occurs spontaneously (Shavitt and Brock 1984; Wells, Hoffman, and Enzle 1984); but it also is possible to encourage individuals to relate stimulus information to themselves and thereby to enhance recall of that information.

A review of some of the ways that self-referencing has been operationalized (generally in non-commercial settings) provides a starting point. One of the successful self-referencing strategies involved instructions to individuals by the experimenter to relate the stimulus information (either trait words or an ad) to themselves (Bellezza 1984; Lord 1980; Shavitt and Brock 1984; Yalch and Sternthal 1985). A variation of that strategy is having subjects think of a personal experience which relates to the stimulus (Bower and Gilligan 1979). Prompting individuals to do this in an advertising context could take many forms. Imbedded within a commercial an announcer or spokesperson

might say "think back to the last time you had a headache that just wouldn't go away" and follow it up with relevant product information. Similarly, it is probable that slice-of-life ads that depict a common problem or situation with which individuals can identify are effective in encouraging them to pay attention to the ad and remember the brand name. Sex-role portrayals encourage audiences to identify with a product, thereby enhancing their involvement with it. The likelihood of subjects' self-referencing in each of these instances is supported by Rogers (1981), who suggests that the "self" is a fixed reference point which individuals use to interpret information. He suggests that individuals make relativistic appraisals when processing personally-relevant information. Consequently, it is likely that if individuals can identify with an ad portrayal, their response to the ad will be favorable. If individuals cannot identify with a portrayal, the ad may not get their attention or they may exhibit reactance-based negative attitudes. In this latter case, individuals may elicit a large number of self-relevant responses but the valence of those responses may provide more explanatory information than their magnitude. Each of these types of ads could be compared to an ad with straight product-benefit copy to determine the extent to which they actually generate self-referencing on the part of individuals.

It is also possible that the way in which an ad is worded affects individuals' aptitude to self-reference the message information. In writing advertising copy, experts suggest that to get and keep an audience interested, one should refrain from using the pronoun "I" and instead write in terms of "you" (Bovee and Arens 1986). Rogers (1974) reports that first-person sentences (in the form of personality items) have been used to gain access to an individual's self-concept, although the context here is not communications-related. Researchers measure the extent to which persons self-reference by analyzing their cognitive responses and the occurrence of "I"-related statements (Davis and Brock 1975; Shavitt and Brock 1985). Thus, it should be possible to stimulate self-referencing by addressing individuals in the second person ("you") or by name (in a direct marketing or personal selling context). Individuals should be more likely to engage in self-referencing when exposed to an ad written in the second person than to those written in the first (a testimonial) or third ("most people") persons. Such ads could be tested against one restricted to product benefit copy, provided the same product-related information is conveyed in each.

In direct mail and personal selling, it is common to induce persuasion by addressing an individual by name. Personalization of this type is assumed to be effective because individuals like hearing their name and may feel the stimulus person is genuinely interested in them. It is also obvious, however, that this strategy enhances persuasion because it increases the likelihood that the individual will self-reference the information.

Another technique commonly used by social psychologists to induce self-referencing is to ask individuals whether trait words are descriptive of themselves (Bower and Gilligan 1979; Rogers et al. 1977; Wells, Hoffman, and Enzle 1984). Subjects engaging in this self-reference task exhibited greater recall for those words than subjects asked just the relative meaning of each word (Rogers et al. 1977) or subjects instructed to relate the word to another person (Bower and Gilligan 1979). In an advertising context, an announcer or spokesperson could facilitate this strategy by asking the audience a question that links a product benefit to their own needs. For calcium-fortified milk, for example, an announcer might begin with a question like: "Are you concerned that you're not getting enough calcium in your diet?" This strategy would induce self-referencing because it prompts the audience to focus their attention on themselves while providing a link with the relevant product information. According to Bower and Gilligan (1979), appeals directed at an individual's self-interest are superior to those which focus on an audience's concern for others ("Are you concerned that your family is not

getting enough calcium?") Research suggests that the "self" is a much more organized structure than the "other" and therefore less effort is required to process self-relevant information than other-relevant information (Bower and Gilligan 1979; Keenan and Baillet 1980; Kuiper and Rogers 1979; Rogers 1981). It also induces deep encoding of information which leads to superior memory. Keenan and Baillet (1980) argue that the self is the richest schema in memory. It would be interesting to compare these two conditions against an ad that simply describes product benefits to assess the extent of self-referencing stimulated by each.

At this point it should be noted that the strategies discussed thus far are complementary. Asking an audience, for instance, about their concern for themselves on an issue involves the use of second person pronouns in the copy and induces subjects to relate the stimulus information to themselves. This is not to say that the strategies are equally effective, however. Directing a question to an audience gives them the opportunity to respond negatively as well as positively (maybe they aren't concerned about getting calcium in their diet). Potentially, ad copy written in the second person, without a self-descriptive question, is superior to the same message when it begins with a question.

Other studies suggest additional ways to induce self-focused attention--the use of mirrors (Wicklund and Duval 1971), TV cameras (Duval, Wicklund, and Fine 1972) and subjects' own voices which were taped (Ickes, Wicklund, and Ferris 1973). Retailers have long used mirrors in department stores to create an image for a store or to give an area the perception of depth. While we doubt that it has been investigated empirically, it is highly likely that these mirrors increase store traffic and sales as a result of inducing individuals to focus attention on themselves (and the merchandise surrounding them). In hat and shoe departments, mirrors are placed in open view so that customers can try on the merchandise and evaluate the extent to which it flatters them, or to view themselves as others will. Although individuals can make purchase judgments simply by trying on these items and assessing their fit, it is likely that sales increase as a result of allowing customers to view themselves with the item. If individuals do not positively evaluate their image with one item, chances are good that they will try another. This self-with-object judgment is important to the consumer's ultimate behavior.

It is obvious that marketers presently use many of the techniques reviewed thus far but it is not clear why many of them seem to work. By applying methods by which researchers in other disciplines have been successful in inducing self-referencing, marketers can test the relative effectiveness of existing strategies (which may be inducing self-referencing) and discover new ones.

Measuring the Self-Reference Effect

The research discussed thus far suggests ways to measure the extent to which self-referencing occurs and its subsequent effect. Most of the earliest studies (with the exception of Davis and Brock, 1975) focused on the latter. The effectiveness of self-referencing was assessed primarily through recall of stimulus trait words (Bower and Gilligan 1979; Keenan and Baillet 1980; Kuiper 1978; Kuiper and Rogers 1979; Rogers et al. 1977; Lord 1980). Davis and Brock were the first to measure the occurrence of self-referencing by analyzing individuals' cognitive responses. They hypothesized that individuals' use of first-person pronouns was indicative of self-referencing on their part. Subjects in the self-referencing condition were expected to use more first-person pronouns than other subjects, a result which was supported.

In a later study, Shavitt and Brock (1984) began categorizing and ordering subjects' cognitive responses. They went beyond measuring the valence of subjects' cognitive responses and the extent of counterarguing, support arguing and source derogation (typical measurement procedures) to

measuring their semantic content. The authors developed a cognitive response coding scheme which included self, product, and execution-related thoughts. Self-thoughts were considered most important in influencing individuals' attitudes. They conceptualized self-thoughts (self-referencing) on two dimensions, self-as-origin, and self-as-target. Thoughts categorized within the former were those where individuals expressed their own beliefs and experiences relative to the message, rather than playing back message arguments. Self-as-target thoughts were those that suggested links between the respondent and the message, i.e., when respondents referred to the product relative to their own needs and interests (in line with Krugman's notion of high involvement as "the number of conscious bridging experiences, connections, or personal references . . . that the viewer makes between his own life and the stimulus" (cited by Shavitt and Brock 1984). As previously reviewed, self-referencing did induce more self-thoughts than other treatments and these self-thoughts were related to subjects' attitudes and behavior (two other measures taken as well).

Cognitive responses were also collected by Yalch and Sternthal (1985). They had judges classify responses into four categories--nutrition-related, taste-related, other product-related, and message-execution-related--and rate the valence of each thought. Originally, they tried to classify responses as self-associations or associations linking the message to the self but found inconsistency among the judges' evaluations. Their self-referencing treatment was found to differentially influence the nature and valence of subjects' cognitive responses. Whether individuals actually self-referenced the information was determined by the nutrition-related or taste-related associations and subjects' attitude toward the product's nutritional value and taste (scaled measures), not by the number of self-associations as in the previous two studies reported.

In order to assess the effectiveness of marketing strategies based on self-referencing, it would seem that cognitive responses, attitudes, and a behavioral measure (or purchase intention) should be taken--so as to assess the actual occurrence of self-referencing among individuals (since some studies support its spontaneous occurrence). In analyzing cognitive responses, we are especially impressed with the coding scheme devised by Shavitt and Brock (1984), which focuses on "self" thoughts.

Additionally, we would recommend a self-referencing manipulation check such as the one used by Shavitt and Brock ("When reacting to the commercial, to what extent were you trying to focus on your own experiences?") or questions which address the process of self-referencing. For instance, Shavitt and Brock also had subjects rate the extent to which each thought came from their own thinking or experiences to assess the origin of each response. Bellezza (1984) asked his subjects how easy it was to relate each trait word to a personal experience (a measure of the degree to which subjects could associate with each word). If the stimulus is a slice-of-life commercial or a sex-role portrayal, individuals could be asked the extent to which they could picture themselves in that situation. If "you" copy is being tested, individuals could be asked about how well they could identify with the product and its benefits or to what degree they thought about how the product could benefit them.

Finally, it may be useful to measure individual differences in self-referencing to assess whether some individuals are more susceptible to such strategies than others. Snyder's (1974) Self-Monitoring Scale (SM) may provide insight here. It would allow us to identify individuals who are likely to monitor themselves and adjust their behavior out of concern for social appropriateness. Snyder (1974; Snyder and DeBono 1985) found that individuals who were high self-monitors were more likely to use social comparison information than individuals who were low self-monitors. In an advertising context, high SMs should be more susceptible to judging the social appropriateness of sex-role portrayals or slice-of-life advertising and they should be more

likely to respond negatively to socially inappropriate portrayals than low SMS.

It also would be useful to measure individuals' self-schema relative to a persuasive communication to determine their receptivity to a message. Markus' (1977, 1980) technique offers a way to do this. Individuals' self-schema should be a critical element in predicting their responses to slice-of-life commercials and sex-role portrayals.

Conclusion

Since the self-referencing process plays an important role in the way individuals attend to and process incoming information, marketers should benefit by understanding the instrumental role that self-judgments play in consumers' perceptions of commercial stimuli. Although marketers often use strategies that are intuitively logical (or simply that work), they rarely take the time to consider the reasons such strategies work. It seems apparent that these reasons frequently reside in the self-referencing phenomenon, and to that extent, its explication should not only account more fully for the effectiveness of currently used strategies but also prescribe modified (and still more effective) ones in the future.

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A CONDITIONAL PROBABILITY VIEW OF THE ROLE OF PRODUCT WARRANTIES IN REDUCING PERCEIVED FINANCIAL RISK

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Abstract

Probability components of a conditional probability model of perceived financial risk were manipulated to create multiple product profiles for hypothetical brands of stereos. One of these component probabilities represented the likelihood that repairs would be covered by the manufacturer's warranty. The efficacy of the model was tested through rank-order correlations and through ANOVA. The correlations supported the conditional probability model. ANOVA revealed that the probability of warranty coverage significantly affected perceived risk as did the other component probabilities. The two-way and the triple interactions predicted by the conditional probability model were generally not forthcoming.

Introduction

A conditional probability perspective of perceived financial risk presumes that for product failure to lead to a financial loss, a series of events must take place, with each event conditional upon the occurrence of the previous events in the series. Financial risk is presumed to be a function of the probability of a significant financial loss. The probability of a significant financial loss can be represented by the following conditional probability model: "P(Significant financial loss) = P(Significant financial loss|financial loss)P(financial loss|product failure)P(product failure)" (Vann 1984, p. 73). Even though some authors have discussed perceived risk as if it resulted from a consideration of a sequence of conditional probabilities (e.g., Cunningham 1965, Roselius 1971, Deering and Jacoby 1972, Taylor 1974, Humphreys and Kenderdine 1979) and even though Vann (1984) has proposed the conditional probability formulation shown above, this model has not been tested.

While the probability of product failure should only be a reflection of product quality, product warranties can be positioned as affecting the other two probabilities within this framework. First, a warranty can be positioned as affecting the probability of a financial loss given product failure. This effect would result from the differential coverage of the particular warranty and would depend upon the proportion of expected failures which would be covered. A second way that the effect of product warranties may be represented within this framework is through their impact on the probability of significant financial loss given some financial loss. For example, a recent Ford advertisement (People October 21, 1985, p. 80) presents a warranty which provides for a maximum charge of \$25 on any repair visit (i.e., $P(\text{loss} > \$25 | \text{some financial loss}) = 0$).

The effect of warranty quality on risk perception has been examined by Bearden and Shimp (1982). However, they did not position warranties within a conditional probability framework. The present study examines the validity of the conditional-probability model of perceived financial risk. In addition, it tests the impact of differential warranty coverage within this framework through the manipulation of the proportion of repairs covered by a warranty.

Method

This study involved the creation of eight different product profiles of hypothetical stereo brands through the manipulation of three different variables (each at two levels): the proportion of stereos which would need repair during the first 6 months, the proportion of stereo repairs which would not be covered by the warranty, and the proportion of non-covered repairs which

would cost more than \$100. The stereo profiles were presented to subjects in an experimental setting in a $2 \times 2 \times 2 \times n$ factorial design such that each subject saw and evaluated each profile.

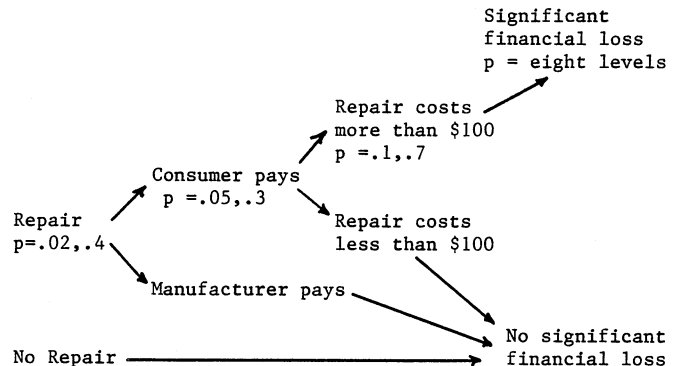
Stimuli

Each product profile was presented on a separate page and consisted of descriptions of hypothetical brands of stereos such as the following:

Incidence of repair records indicate that approximately 40 in 100 stereos of this brand require some repair during the first 6 months of use. The company offers a warranty that fully covers some types of repairs made during the initial 6 months (both parts and labor). About 5 of 100 repairs which occur are not covered by the warranty. Of the repairs which occur during the first 6 months of use that are not covered by the warranty, about 70 out of 100 cost more than \$100.

The probability of requiring repair (P(R)) was manipulated at two levels (.4 and .02); the probability of the repair's not being covered (P(NCov)) was manipulated at two levels (.3 and .05); and the probability of non-covered repairs' costing more than \$100 ($P(> \$100)$) was also manipulated at two levels (.1 and .7). As all combinations were represented, this resulted in eight different product profiles. A tree diagram of the resultant sequential effects is shown in the Figure.

Figure



Dependent and Manipulation Check Measures

On the bottom of the each page, below the product profile, subjects were asked to respond to six questions. Three were criterion measures and three were manipulation check measures; all were nine point scales. The primary criterion measure asked subjects "How much financial risk do you think would be associated with buying this stereo brand?" and had scale endpoints labeled "NO RISK" and "EXTREME RISK." A second criterion measure was a semantic differential item for evaluating the stereo and had endpoints of "GOOD" and "BAD." The third criterion measure asked: "If you were to buy one of these stereos, how certain are you that you would have to pay a significant amount to have it repaired?" The response categories for this question had endpoints labeled "EXTREMELY CERTAIN" and "EXTREMELY UNCERTAIN." This question served as a measure of the overall probability of significant financial loss.

Manipulation check measures were provided for each of the manipulated probabilities. Each one had response category endpoints labeled "EXTREMELY LIKELY" and "EXTREMELY UNLIKELY." The first asked: "How likely do you think it is that this brand of stereo would need repair during the first 6 months of use?"; the second asked: "How likely do you think it is that any repairs that are required for this brand of stereo during the first 6 months of use would not be covered by the warranty?"; and the third asked: "How likely do you think it is that any repairs not covered by the warranty during the first 6 months would cost more than \$100?"

Hypotheses

It was hypothesized that each of the probabilities would have a significant main effect on all of the criterion variables -- that perceived financial risk and the perceived certainty of paying a significant amount would increase and the Good/Bad response would decrease with increasing chances of needed repair, with increasing chances of the consumer's having to pay for the repair, and with increasing chances of the cost of any non-covered repair's costing more than \$100. In addition, it was hypothesized that all of the two-way interactions and the three-way interaction would be significant. Since the conditional probability model involves the multiplication of the three manipulated probabilities, the effect of any one is weighted by the other two. A change in any component probability should have little effect if the other two are small, but should have an increased effect if the other two are large. The same reasoning would apply to the weighting of the effect of one probability by either one of the others (i.e., to the two-way interactions), but the size of the two way interactions would depend upon the level of the third probability (i.e., the three-way interaction should be significant).

Application of the conditional probability model to the component probabilities of the eight profiles results in eight, unique, resultant probabilities. It was hypothesized that the rank orderings of the means of risk, certainty, and good/bad would be significantly correlated with the rank ordering of the calculated probabilities for the eight profiles.

Procedure

The experiment was conducted in a classroom setting with one undergraduate class of 31 students and one graduate class of 46 students. Students received class participation credit for their role in the experiment. Responses were completely anonymous. Identification numbers were distributed to the students for them to record on each page of their packets. Since the experimental design relied on repeated measures (i.e., it was a completely within subjects design), it was necessary to make an effort to control for carry-over effects (Keppel 1973, p. 395). Consequently, each set of eight profiles was randomly ordered. The data from subjects with incomplete responses was discarded; all analyses in the study are based on the remaining 69 sets of responses.

Analysis

Two types of analysis were conducted. First, analysis of variance was conducted to determine the success of the manipulations and to test the main effect and interaction hypotheses. Because of the use of the repeated-measures design, the error term against which each effect was tested was the interaction of subjects with the variable whose effect was being tested (Calfee 1975, p. 102). Second, the rank-order correlations of the ranks of calculated probabilities with the ranks of means for each criterion variable were examined.

Results

Manipulation Checks

Each of the probabilities significantly affected its

corresponding measure. P(R) significantly affected perceived likelihood of repair ($F_{1,68} = 411.42, p < .0001$, means of 6.50 and 2.73 for the high and low probability conditions respectively). Neither the three-way nor either of the two-way interactions was significant. The likelihood of repair was significantly affected by P(NCov) ($F_{1,68} = 8.51, p = .0048$); however, the effect size was much smaller than that for P(R), with means of 4.76 and 4.46 for the high and low P(NCov) respectively. This has implications for real firms, consumers may presume that if the firm is willing to provide a good warranty then the quality of the product must be good. (See Olson and Jacoby 1972 for a study which found that warranties and guarantees were influential cues to perceived brand quality for some product categories.) P(>\$100) had no effect on perceived likelihood of repair.

P(NCov) significantly affected the perceived likelihood of a repair's not being covered ($F_{1,68} = 131.48, p < .0001$, with means of 5.52 and 3.41 for the high P(NCov) and low P(NCov) conditions respectively). However, P(R) also significantly affected this measure ($F_{1,68} = 13.88, p = .0004$). However, as for the inferential effect of P(NCov) on likelihood of repair, this effect was not very large relative to the intended manipulation (means of 4.78 and 4.14 for the high and low P(R) conditions respectively). This measure was unaffected by P(>\$100) and none of the interaction effects was significant.

The P(>\$100) manipulation successfully affected the perceived likelihood of any repairs' costing more than \$100 ($F_{1,68} = 1383.83, p < .0001$, means of 7.0 and 3.83 for the high and low P(<\$100) conditions respectively). This likelihood was also significantly affected by P(R) ($F_{1,68} = 17.68, p < .0001$) and by P(NCov) ($F_{1,68} = 6.2, p = .015$). However, again the size of the effect was small compared to the intended effect (means of 5.68 and 5.14 for the high and low levels of P(R) and means of 5.58 and 5.26 for the high and low levels of P(NCov)). None of the intreraction effects was significant.

Rank-Order Correlations

Table 1 presents the calculated values for the conditional probability model for each stereo profile along with the means and rank of perceived risk, certainty, and the good/bad rating for each stereo profile. In addition, the calculated value and rank for each profile using an additive model (in which the probabilities are summed rather than multiplied) are presented for comparison purposes.

The rank-ordering of certainty has a perfect correlation with the calculated ranks using the conditional probability model. This provides strong support that subjects were processing the probabilities in the fashion specified by the model in assessing their overall perceived probability that if they were to buy one of the stereos they would have to pay a significant amount to have it repaired. However, perceived risk did not translate directly from this perceived probability. The rank ordering of perceived risk contained two reversals compared to the ranks of the calculated probabilities (3↔2 and 5↔4). Nevertheless, the Kendall's tau rank-order correlation was .86 ($p < .005$) (Conover 1980, p. 256). The rank ordering of the good/bad rating means also parallels the ordering of the calculated probabilities, with a rank-order correlation of -.93, $p < .005$; brands are evaluated more positively for lower calculated probabilities of a significant financial loss.

An alternative to multiplying the component probabilities would be to add them. The values for an additive model and the resulting ranks are also shown in Table 1. The rank orderings are quite different from those calculated using the conditional probability model; especially since the first and last ranks must be the same (i.e., the lowest sum and the lowest product must come from the same set of three probabilities as must the highest sum and product). Since the certainty ranks were perfectly correlated with those for the values calculated

Table 1
Treatment Values and Criterion Measure Means and Ranks by Stereo Brand

Stereo Brand	Probability			Calc. Prob.	R		R ¹		R ²		R ³		R ⁴	
	R	NCov	>\$100		a	Perc Risk	a	Cer-tainty	a	Good/Bad	a	Add. Mod.	a	n
111	.4	.3	.7	.084	1	7.10	1	6.72	1	2.43	1	1.40	1	
121	.4	.05	.7	.014	2	6.20	3	5.82	2	3.01	2	1.15	2	
112	.4	.3	.1	.012	3	6.33	2	5.36	3	3.13	3	.80	4	
211	.02	.3	.7	.0042	4	4.10	5	4.87	4	6.26	5	1.02	3	
122	.4	.05	.1	.002	5	5.20	4	4.49	5	4.23	4	.55	6	
221	.02	.05	.7	.0007	6	4.07	6	4.29	6	6.48	6	.77	5	
212	.02	.3	.1	.0006	7	3.52	7	3.77	7	6.77	7	.42	7	
222	.02	.05	.1	.0001	8	2.71	8	3.01	8	7.87	8	.17	8	

- ¹ Kendall's rank-order correlation with calculated rank = .86, p < .005.
- ² Kendall's rank-order correlation with calculated rank = 1.0.
- ³ Ranked from worst to best for ease of comparison with other rank orderings.
- ⁴ Kendall's rank-order correlation with calculated rank = -.93, p < .005.
- ⁴ Kendall's rank-order correlation with Perceived Risk rank = .71, p < .005.

using the conditional probability model, this suggests that subjects (at least on the average) were not using an additive model.

The correlational findings provide support for the conditional probability model of perceived risk. Certainty, risk, and the good/bad rating were all highly correlated with the values of the overall probability of a significant financial loss calculated through the use of the conditional probability model.

Analysis of Variance Findings

Risk. The main effects on risk of all of the component probabilities were significant (see Table 3). Perceived risk increased significantly with each increase in probability. As can be seen in Table 2 moving from any cell to adjacent cells of increasing probability results in an increase in the mean of perceived risk. However, only two of the two-way interactions were significant: P(R)xP(NCov) and P(NCov)xP(>\$100). The reader will recall that the effect of any probability was hypothesized to be greater when either of the other probabilities was high. This hypothesis was supported for the P(R)xP(NCov) interaction; improved warranty coverage had a greater effect when the probability of a repair was higher.

However, the reverse was true for the P(NCov)xP(>\$100) interaction. The effect of P(>\$100) was greatest when the probability of the consumer's having to pay was low. This finding is not compatible with the conditional probability model.

Certainty. The certainty with which the subjects perceived that they would have to pay a significant amount to get the stereo fixed if they were to buy it was significantly affected by all three of the component probabilities from the conditional probability model. This certainty was higher for higher levels of each of the component probabilities. None of the two-way interactions was significant nor was the three-way interaction. While the significant main effects are supportive of the conditional probability model, the lack of significant interactions is supportive of an additive rather than a multiplicative model.

Good/Bad evaluation. The good/bad evaluation was also significantly affected by all of the component probabilities from the conditional probability model. Increases in any of the probabilities was accompanied by a decrease in the evaluation of the stereo. One of the two-way interactions was significant: P(NCov)xP(>\$100). The results of this interaction paralleled the same in-

Table 2
Criterion Measure Means by Condition

	P(R)=.02		P(R)=.4	
	P(NCov)=.05	P(NCov)=.3	P(NCov)=.05	P(NCov)=.3
P(>\$100)=.1				
Risk ¹	2.71	3.52	5.20	6.33
Certainty ²	3.01	3.77	4.49	5.36
Good/Bad ³	7.87	6.77	4.23	3.13
P(>\$100)=.7				
Risk	4.07	4.10	6.20	7.10
Certainty	4.29	4.87	5.83	6.72
Good/Bad	6.48	6.26	3.01	2.4

- ¹ 1 = no risk, 9 = extreme risk.
- ² 1 = Extremely uncertain, 9 = Extremely certain.
- ³ Transformed -4 ↔ +4 (9-point) semantic differential (1 = bad, 9 = good).

Table 3
ANOVA Results for Criterion Measures

Source	df	Criterion	SS	Error SS	F	p
P(R)	1	Risk	939.1304	231.6196	275.71	.0001
		Certainty	360.3551	351.1449	69.78	.0001
		Good/Bad	1829.7554	331.1196	375.77	.0001
Error: P(R)xS	68					
P(NCov)	1	Risk	71.0217	106.7283	45.25	.0001
		Certainty	82.9638	197.5362	28.56	.0001
		Good/Bad	77.6250	93.7500	56.30	.0001
Error: P(NCov)xS	68					
P(>\$100)	1	Risk	118.7246	156.0254	51.74	.0001
		Certainty	221.9203	268.5797	56.19	.0001
		Good/Bad	125.3062	144.0688	59.14	.0001
Error: P(>\$100)xS	68					
P(R)xP(NCov)	1	Risk	12.1812	87.0688	9.51	.003
		Certainty	1.6304	80.3696	1.38	.24
		Good/Bad	1.1322	99.2428	1.13	.38
Error: P(R)x P(NCov)xS	68					
P(R)xP(>\$100)	1	Risk	.2609	89.9891	.20	.66
		Certainty	.8768	121.1232	.49	.49
		Good/Bad	.0018	78.3732	.00	.97
Error: P(R)x P(>\$100)xS	68					
P(NCov)xP(>\$100)	1	Risk	8.8768	95.3732	6.33	.014
		Certainty	.1812	104.8188	.12	.73
		Good/Bad	17.0453	112.8297	10.27	.002
Error: P(NCov)x P(>\$100)xS	68					
P(R)xP(NCov)x P(>\$100)	1	Risk	2.6159	111.1341	1.60	.21
		Certainty	.3551	143.1449	.17	.68
		Good/Bad	1.1322	138.7428	.55	.46
Error: P(R)xP(NCov)x P(>\$100)xS	68					

¹ Three separate ANOVA's were run; data are combined for presentation purposes.

teractive effect on perceived risk; the effect of the warranty coverage had the greatest effect when the P(>\$100) was lowest -- contrary to the prediction of the conditional probability model. The three-way interaction was not significant.

Summary and Conclusion

Some of the findings of this study are supportive of the conditional probability model and some are not. The rank-order correlations of the various criterion means with the calculated values from the model were supportive of the model while ranks derived from an additive model were quite different from those for the calculated values and for the mean criterion values. ANOVA results provided only weak support for the multiplicative model. Only one of the predicted two-way interactions was significant in the right direction. Two others, while significant, were opposite to the direction hypothesized. It should be recalled that while the probabilities in this experiment were manipulated orthogonally, they were not perceived orthogonally. Changes in one probability affected the perceived likelihood of other occurrences in the sequence. This is an effect that could have implications for manufacturers. The introduction of a good

warranty could decrease the perceived probability of product failure.

One caveat is in order regarding the within-subjects design that was used in the study. This design has considerable statistical power. Some of the effects which were detected, while statistically significant, may be of little practical significance. This would appear to be especially relevant for the effects of the probability manipulations on the perceived likelihood of other occurrences observed in the manipulation checks and for the two-way interactions observed for the criterion measures.

Suggestions for Future Research

This study was intended as an exploratory examination of the conditional probability model of perceived risk and to assess the role of warranty quality with this conditional probability framework. However, it has several shortcomings. The number of subjects is small and the subjects were students. While the statistical effects of a small sample size are overcome by the within subjects design, this type of design creates the potential for multiple-treatment interactions, pretest-treat-

ment interactions, and fatigue. It would probably be better to use more subjects and to have them view only one profile each. Students are probably more sophisticated than the general population at the use of statistical data. Effects observed using student subjects may not be replicated using a more heterogeneous sample. Only two levels of each variable were used in creating the product profiles used in the study. Only one product category was used. The choice of \$100 as the threshold for a "significant" financial loss, while based on discussions with other researchers and possessing some face validity for this product category, was arbitrary; no manipulation check was performed to assess its validity. Framing is an issue that was not addressed in the study (Fischhoff 1983, Puto, Patton, and King 1985). Framing is relevant not only to reference points (e.g., \$100) but also to whether alternatives are represented as gains or losses. All probabilities were expressed in terms of a the likelihood of a loss. Differential framing results would be relevant to manufacturers who are drafting the terms of their warranty statements.

The following changes are suggested for future research regarding the conditional probability model:

1. Use more subjects,
2. use non-student subjects,
3. use more than two levels for each probability,
4. use multiple product categories,
5. specifically address framing as an issue,
6. test any threshold values used in the study or include multiple values in the design.

Perhaps such changes could eliminate some of the ambiguity of the present findings.

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SOURCE CREDIBILITY EFFECTS:
A TEST OF BEHAVIORAL PERSISTENCE

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Abstract

The effect of source credibility on behavioral persistence is tested in an experimental setting. The results support the behavioral hypothesis based on self-perception theory: the moderately credible source is found to facilitate greater behavioral persistence than a more credible source.

Review of Source Credibility Effects

There appears to be some acceptance of the belief that the characteristics of a communicator influence an audience's reception of a message. This belief affects not only the use of testimonials for commercial advertising but also the choice of endorsers for political candidates and social causes.

Experimental research dealing with the persuasive effect of source credibility has created some support for this premise (cf. Sternthal, Phillips, and Dholakia 1978). Researchers have found that sources having more of the credibility dimensions induce greater attitude change immediately than do sources having less of these dimensions (Hovland and Weiss 1951; Johnson, Torcivia, and Poprick 1968; Kelman and Hovland 1953; Miller and Baseheart 1969; Schulman and Worrall 1970; Warren 1969; Watts and McGuire 1964; Whittaker and Meade 1968; but not Hovland and Mandell 1952). In more commercial settings, research indicates similar effect of source credibility on readership scores (Freeman 1957) and product and company attitudes (Fireworker and Friedman 1977; Friedman and Friedman 1979; Kamer, Azhari, and Kragh 1975; Mowen and Brown 1981).

However, studies that have looked at the interactions of source credibility with other variables have not supported the greater effectiveness of higher credibility sources. The conditions that have been reported to interact with source credibility include (a) message conditions such as: message congruence with source's self-interest (Eagley and Chaiken 1975; Walster, Aronson, and Abrahams 1966), and the novelty of message arguments (McCroskey 1969); (b) audience characteristics such as level of authoritarianism (Johnson, Torcivia, and Poprick 1968), issue-involvement (Johnson and Izzet 1972; Johnson and Scileppi 1969; Rhine and Sevarance 1970) or locus of control (Ritchie and Phares 1969).

Furthermore, when researchers have focused on behavioral change and not only on attitudes, less credible sources have been found to be more effective than higher credibility sources (Dholakia and Sternthal 1977; Hill, Smith, and Mann 1986; Tybout 1978; Powell 1965; except Brock 1965). If one's behavior is available as a cue, it appears that attitude change is greater among those exposed to a less credible source (Dholakia and Sternthal 1977; Tybout 1978). If the behavioral manipulation was perceived to be a choice situation, then it was observed that the less credible source was more persuasive when compliance was perceived to be voluntary (Eagley and Chaiken 1975; Himmelfarb and Arazi 1974; Jones and Brehm 1967).

It appears from a review of the experimental literature that the use of source credibility for persuasion must consider the situational context and rely on different models to explain the outcomes (Sternthal, Phillips, and Dholakia 1978). Specifically, cognitive response analysis (Greenwald 1968) may be employed to predict that highly credible sources will be more persuasive than low credibility sources when only the source and communication-related cues are available. On the other hand, when

an individual's own behavior is also available as a cue, then self-perception theory (Bem 1972) can be employed to predict that low credibility sources will be more persuasive than highly credible ones.

If the implications of these models are to have any practical and theoretical significance, it must be determined whether the reported persuasive effectiveness of a less credible source, when behavior is available as a cue, results in repeated behavior. In other words, can a less credible source elicit great behavioral response in the future? This is particularly relevant to consumer behavior where repeat behaviors are consistently sought through marketing actions.

A Test of Persuasive Persistence

The purpose of the investigation reported in this paper is to test the persistence of the source credibility effect. While there are some studies that have examined the effect of source credibility on behavior (Brock 1965; Dholakia, and Sternthal 1977), there are no studies that have looked at the impact on behavior over time. The study examines a situation where an individual has available one's own behavior before responding to a subsequent request. Second, it examines the impact of source credibility on behavioral responses over time.

Research Hypothesis

If the subjective causal inference process implied by self-perception theory is valid, then one can hypothesize greater behavioral response from individuals exposed to a low credibility source than those exposed to a highly credible source. This relationship is expected in only those communication situations where initial behavior is available as a cue to assess one's attitudes.

The support for this hypothesis is drawn from attribution theory (Kelley 1975). This theory can be used to specify the process by which people evaluate communications from others, and it identifies the attitudinal effects of this evaluation (Kaplan 1976). For individuals who enact a behavior in response to a communication, observing that the behavioral compliance occurred despite message advocacy by a low credibility source should augment the attribution of behavior to internal causes. Having made this causal attribution, subsequent behavior becomes more likely from those exposed to a low credibility source. Conversely, if the behavioral compliance can be attributed to an external cause like a high credibility source, then individuals are likely to be less favorable about the issue and also less certain about the attitudinal inference. Subsequent behavior, therefore, is likely to be more uncertain from those exposed to a high credibility source.

Method

Research Setting. The experiment was conducted in India while the author was visiting one of the Institutes of Management. Consumer activism was in its nascent stages. Development and marketing trends highlighted weaknesses and gaps in the delivery of customer satisfactions, and the stage was being set for the emergence of Nadar-style consumer activism. It provided an opportunity to test research implications of prior source studies conducted by the author in a different socio-economic context while staying within a comparable issue/topic.

Subjects. Sixty-one participants in the study were recruited from an introductory graduate course in management. During one of the regular class hours, the stu-

dents were asked to participate in a study on consumer protection. The sponsors of the study were described as an external group who had sought the assistance of the course instructors to administer the study. Participation was made voluntary, and all chose to cooperate. The participants were randomly assigned to the two-source credibility conditions.

Procedure. Experimental subjects were given booklets containing the independent and dependent variables. The experimental task involved reading a one-page message dealing with the need for a consumer-protection organization to meet the growing problems of consumer rights in India. After reading the message, the individuals were asked to volunteer for a consumer-protection organization. Then, they were assessed on their attitudes toward consumer protection and their perceptions of the source. One day after reading of the one-page message in class, all individuals were contacted through an internal mail delivery system with a second request. Finally, three months after the initial contact, a meeting was scheduled with a prominent consumer activist as the featured speaker. Notice of the meeting was again delivered to individuals through the internal mail system.

Independent Variables. Source credibility was the only independent variable manipulated in the study. The source description was presented at the beginning of the message. In the high credibility condition, the source was described as a successful lawyer who was a consumer activist and volunteer and held the non-salaried position of president of a fictitious consumer federation. The less credible source, on the other hand, was portrayed as a state government official who spoke on various topics before public gatherings as part of his public relations job.

Dependent Variables. The major dependent variable of interest is behavioral persistence. This has been operationalized as a categorical response (compliance-no compliance) to three behavioral requests: a) request to be a volunteer; b) intention to attend a meeting, and c) actual attendance. The second and third requests took place 1 day and 3 months, respectively, after the initial request.

In addition, a measure of individual attitudes toward consumer protection in India and perception of the source was obtained following the first behavioral request. Individual attitudes toward consumer protection were assessed on a seven point Likert-type scale composed of three items. An overall measure of attitude was obtained by summing each individual's response on the three-item scale. Finally, the source credibility manipulation was checked by a semantic differential scale comprising three bipolar adjectives. The three adjectives related to the expert, trustworthy and attractive dimensions of source credibility. The attitude and source perception measures were included in the booklet along with the message and source description and administered in the classroom setting. In all cases, the measure of source credibility followed the behavioral request and attitude variables.

Results

Manipulation Check

A manipulation check was performed to determine whether or not the source credibility induction was successful. After receiving the persuasive appeal from either a high or low credibility source, respondents evaluated the communicator's credibility on three items. The analysis shows that the manipulation was highly successful ($F=14.76$, $df=1/59$, $p < .001$) (See Table 1).

TABLE 1

SOURCE CREDIBILITY MANIPULATION CHECK

Credibility Dimension	Source Credibility		
	High	Low	F
Sum Scale ^a	15.48 ^b (.337)	13.63 (.343)	14.76**
Expert-Not Expert	5.42 (.195)	4.27 (.198)	17.22**
Good-Bad	5.58 (.166)	4.97 (.169)	6.71*
Attractive-Unattractive	4.48 (.164)	4.40 (.166)	0.13
	n=31	n=30	

*p < .01

**p < .001

^aRange of Sum Scale: 3-21

^bMean (s.d.)

Since the manipulation of the source was based on only the expertise and trustworthy dimensions of credibility, the source perceptions were analyzed at the item level. It showed that the treatment groups differed in their source perceptions on the "expert" and "good" item but not on the "attractive" item. The finding that the two sources were similarly perceived on the attractive dimension rules out the possibility of demand character as a possible explanation of the result (Orne 1969; Sternthal and Dholakia 1978).

Initial Behavioral Compliance

Compliance to the request for volunteers was quite high: over two-thirds of the respondents agreed to be listed as volunteers to promote the cause of consumer protection in India. Compliance is greater among those exposed to a message from the less credible source (76.7%) than those exposed to the more credible source (64.5%). The difference in compliance is, however, not significant ($z=1.06$, $p=.15$).

Attitudes

The effect of source credibility on attitudes was measured by three 7-point items. An analysis of variance was performed, and it was found that source credibility had no significant effect on individual attitudes toward consumer protection ($F > 1$ $df = 1/59$; $p > .8$).

Comparison of mean attitude ratings reveals that the group as a whole had quite favorable attitudes toward the cause of consumer protection in India. Both groups had a mean rating of over 17.0 on a sum scale with a maximum value of 21.0. The very nascent stage of consumer protection appears to attract considerable sympathy and support, even from such a "management-oriented" audience. This can be seen also in the very high willingness to become a volunteer in a consumer protection organization. This may be compared to behavioral compliance among management students in a society with more advanced consumer protection issues where intention to sign a petition in favor of a consumer protection bill was much lower (Dholakia and Sternthal 1977).

Behavioral Persistence

The major question of interest in this paper is the effect of source credibility on behavior over time. Behavioral compliance was sought one day and three months

after the communication. Generally, and as to be expected, there is a lower level of behavioral compliance to the delayed requests than the initial request following the communication: only about 26% of the group expressed a willingness to attend a meeting, and 31% actually attended a meeting held three months after the request.

There appears to be no effect of source credibility on behavior one day after the communication ($z=0.51, p > .8$). However, when actual attendance at the meeting is observed, there is a marginally significant effect of source credibility on behavioral compliance ($z=1.32, p=.09$). More respondents exposed to the low credibility source actually attended the meeting than those exposed to the high credibility source. This is despite holding the meeting three months after the initial communication during which a large number of external variables affected the lives of the participants.

The effect of source credibility on behavioral persistence can be seen more clearly when the behavioral responses are aggregated (Table 2). Combining the behavioral compliance measures provides a stronger measure of response consistency and broadens the generalizability of the findings (Epstein 1980).

TABLE 2
SOURCE CREDIBILITY EFFECT ON BEHAVIOR OVER TIME

A. Disaggregate Measure	Source Credibility		z	p
	High	Low		
1. Initial compliance	64.5% 20/31	76.7% 23/30	1.06	.15
2. Compliance to second request to attend a meeting	29.0% 9/31	23.0% 7/30	0.51	.80
3. Actual attendance at meeting	16.0% 5/31	30.0% 9/30	1.32	.09
B. Aggregate Measure				
1. Compliance to all three requests	6.5% 2/31	20.0% 6/30	1.57	.06
2. Compliance on two delayed requests	6.5% 2/31	20.0% 6/30	1.57	.06
3. Compliance on intention but not attendance	22.6% 7/31	3.0% 1/30	2.24	.01
4. Noncompliance to all three requests	35.5% 11/31	16.7% 5/30	1.71	.04

When we examine responses to the two delayed behavioral requests, the low credibility source is able to elicit a higher level of compliance ($z=1.57, p=.06$). On the other hand, there is a larger number of respondents who express an intention to attend a meeting but do not follow through with the intention among those exposed to a highly credible source than the group exposed to a less credible source ($z=2.24, p=.01$). Similarly, there is a higher degree of noncompliance to all three requests among respondents exposed to a high credibility source ($z=1.71, p=.04$).

Discussion

The finding that emerges from the study is that a low credibility source is more effective in eliciting behavioral compliance over time than a more credible source. The implications of the study relate to research and practical issues. This study was conducted in a very different economic environment and found support for the

behavioral predictions based on self-perception theory and extends the findings obtained from the Dholakia and Sternthal (1977) experiment. The differences in behavioral compliance between the two source credibility conditions become more significant as we aggregate the responses. As the number of behavioral requests increase, increasing the commitment required to the cause, we observe a greater rate of compliance and persistent behavioral response among those exposed to the low credibility source. Or to put it another way, it appears that attrition in compliance from the initial request to the subsequent requests is forested by the less credible source.

To empirically test the persistence effect, it is important and necessary to operationalize the first behavioral request such that it leads to high degrees of compliance. Then, given comparable responses to the initial request, one can attribute differences in motivations to the source conditions under which initial behavior occurred. Hence, one would expect weak external justifications for the initial behavior in the less credible source condition and a strong external justification for the highly credible source condition. This, in turn, is predicted to lead to differences in the repetition of behavior under the two source conditions.

The series of behavioral requests may be seen as a form of the foot-in-the-door technique (Freedman and Fraser 1986; Pliner et al. 1974) starting with an initially small request which elicits a high degree of compliance. However, compliance to subsequent requests is influenced by circumstances under which the first behavioral compliance occurs. It appears that the lower credibility condition facilitates greater attribution to personal reasons, and this is enhanced as the time interval between the requests increases. According to Sternthal and Craig (1982), one way of increasing the salience of thoughts about one's behavior is to allow enough time between requests (p. 129); this appears to help the less credible source more than the highly credible source.

The source credibility effect on behavioral compliance occurs despite the similar attitudinal assessments by the respondents exposed to the different source conditions. It is likely that the premessage disposition towards the consumer protection issue was favorable for the group as a whole. While pretest measures are not available, premessage disposition may be inferred from two observations: the relatively high willingness to volunteer for the cause (initial behavior) and the very high mean attitude scores; even noncompliers had a mean (sum) score over 15.0 on a 3-21 point scale. Research evidence indicates that a moderately credible source is more effective than a highly credible source when the message recipients are favorably disposed to an issue (Sternthal, Dholakia and Leavitt 1978).

Limitations

While the study supports the behavioral predictions based on self-perception theory, it does not provide any insights on the underlying mechanisms. To have greater confidence in the behavioral results, further research is needed to provide direct support for the process mediating the behavioral responses of individuals exposed to different source credibility conditions.

The predicted effect on attitudes following initial behavioral compliance was not supported; future research must be able to support predictions regarding attitudes as well as behavior. The failure to find the predicted effect on attitudes has been related to an imposed "ceiling" in the attitude measure. It highlights problems in cross-cultural research. Based on prior research in the United States, business and management students had exhibited a much more negative attitude towards consumerist issues and organizations. This was mistakenly assumed to characterize the Indian students enrolled in a business program modeled after U. S. institutions. While pretests

were conducted to select appropriate question-items, the pretests were not adequately used to anticipate the "ceiling" problem. This problem has to be taken care of in future research.

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HISTORICISM: WHAT IT IS, AND WHAT IT MEANS FOR CONSUMER RESEARCH

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Abstract

Historicism is a major German philosophy of social science. Based upon an intense and all-pervading awareness of change over time, it challenges the logical positivist underpinnings of most current work in consumer behavior. It encourages an expanded research agenda which can confront the complex flux of consumption behavior.

Introduction

"Historicism is an intellectual force with which one must come to terms--whether one wants to or not" (Mannheim 1924, p. 1).

Historicism is a major philosophy of social science developed by a long line of German thinkers. Classically defined as a mode of analysis in which "all of our thought about man, his culture, and his values is fundamentally historically-oriented" (Troeltsch 1922, p. 102), it is characterized by an intense and all-pervading awareness of change over time. Though discussed at length in several social science and humanities literatures, it has been neglected in the marketing and consumer behavior literatures.

It is time to remedy this neglect. Historicism challenges several of the most fundamental environmental and epistemological assumptions of Logical Positivism/Empiricism--assumptions which underlie most of the work being done in our field. Such a challenge will stimulate re-evaluation of these assumptions and lead ultimately to stronger bases for investigation. Moreover, Historicism encourages as well as provides a strong theoretical rationale for, alternative forms of analysis. Some of these forms are already emerging, others have not been employed in consumer research. In particular, Historicism provides a sophisticated rationale for various forms of historical analysis. This paper will explicate this rationale by elucidating the core ideas of Historicism, contrasting and comparing them to the core ideas of Logical Positivism/Empiricism, and discussing their implications for consumer behavior research.

Essential Ideas of Historicism

The ideas discussed here represent the summing up of over a century of German Historicism in the work of the sociologist Mannheim (1924, 1960 [1936]), the historian Meinecke (1972 [1936]), and the philosopher/theologian Troeltsch (1922, 1923). Iggers (1973) provides a lucid English-language introduction to these ideas. Historicism shares four basic characteristics with other German thought; these distinguish German from Anglo-American social science. First, it has a strong historical-dynamic orientation--Marx' "dialectical materialism" and Schumpeter's "creative destruction" are well-known examples of such an orientation. Second, it is strongly sceptical that empirical analysis can be the ultimate test of truth. Third, it emphasizes the innate structure of the mind, which structures empirical data according to its own dynamic, and which is thus far more important than the data in and of themselves. Fourth, it explicitly and emphatically rejects the belief that social science should emulate the methods and assumptions of the natural sciences.

The essential ideas of Historicism may be grouped in two sets, the first expressing the philosophy's basic assumptions and beliefs about the social environment (which includes culture, politics, and economic life), the second expressing the goals of Historicist social analysis. The two sets hang together closely.

Assumptions and Beliefs About the Social Environment

1. Change--complex flux--is the fundamental and all-pervading reality of social life. It suffuses thought as well as institutions and behavior. Social phenomena are viewed

as being "always in flux, as phenomena (Potenzen) which are coming from somewhere in time and pressing on towards somewhere in time" (Mannheim 1924, p. 2). Change is the dominant reality. Social analysis must confront it. It cannot be ignored, or over-simplified, or assumed away as is typically done in Anglo-American social science (Fullerton forthcoming). The emphasis upon change is based upon considerable reflection about the undeniable changes which characterize social phenomena over historical time. Since flux is the normal state of affairs, the analytical construct of "equilibrium" is rejected as bizarre and erroneous nonsense.

2. While some social change is superficial and repetitive, a great deal of it is complex, unpredictable on the basis of past events, and fundamental. As Troeltsch expressed it (1923, pp. 13-14, underlines supplied):

History...is...an immeasurable, incomparable profusion of always-new, unique, and hence individual tendencies, welling up from undiscovered depths, and coming to light in each case in unsuspected places and under different circumstances...Thus the universal law of history consists precisely in this, that the Divine Reason, or the Divine Life, within history, constantly manifests itself in always-new and always-peculiar individualisations--and hence its tendency is not towards unity or universality at all.

According to Historicism, therefore, even basic and long-standing behavior traits and institutions may change radically with time. The process is neither simple nor predictable--assumptions that change follows known and regular patterns are in error. Since behavior, motives, and institutions are neither constant nor universal, the laws and generalities which elucidate them cannot pretend to either constancy or universality.

3. Social phenomena should be seen as belonging to complex and time-bound systems to whose identities they simultaneously contribute and share. The unifying element of such a system is "a single central value, which unites with itself in a more or less clear and energetic manner all the other values" (Troeltsch 1923, p. 94). For example, the central value of the consumption system in advanced Western economies might be said to be "aggressive consumption" (McKendrick, Brewer, Plumb 1982, p. 316).

4. Social systems are "historical individuals" (historische Individuen). See Troeltsch 1922, pp. 119-120). The phrase "historical individual" means, first, that each system has its own unique identity--its individuality. Second, it means that this identity is a dynamic, ever-evolving, one; it is "historical", in other words. As a social system evolves through time it picks up and is somewhat changed by some of the specific values, attitudes, and conditions which characterize the time periods through which it passes. The religious system of Christianity, for example, "presents no historical uniformity but displays a different character in each age" (Troeltsch 1923, p. 13). Its sole constant has been the abstract idea of "Christianity"; the specific values, beliefs, and institutions which flesh out the abstraction have and continue to change over time and across place. Economic systems--including consumption behavior--also reflect their times and change over time (Buecher 1967 [1901], p. 83).

The uniqueness, the individuality, of a system is both temporal and spatial according to Historicist philosophy. Consumption behavior in one nation at one time, for example, will very likely be different from that in another nation at the same time--or the same nation at an earlier or later time. It is becoming very evident that, according to Historicism,...

4. Social science must reject the search for timeless universals--in the subject matter which it treats no such

things exist. "The essence of Historicist analysis," according to Meinecke (1972, p. 1v), "is the substitution of a process of individualizing observation for a generalizing view of human forces." Meinecke believes that Historicism has liberated Western social analysis from the simplistic--and chimerical--search for "natural (i.e., universal) laws" applicable to all times and places. Thus liberated, social analysis can concentrate on probing individual systems and times in all their richness and complexity.

5. Bounded relativism must characterize social analysis. If there are no universals about social processes, then any generalizations must perforce be relative. But the major Historicist thinkers explicitly reject a total, unbounded relativism, whose corrosive and nihilistic nature they recognize (Mannheim 1924; Troeltsch 1922, pp. 68, 108). They see very clearly that Historicism taken to extremes would deny the possibility of any theory or generalization: every phenomenon would be seen as unique at every moment. This extreme, however, is considered as bad as the belief in "natural laws".

Historicism's major advocates posit a bounded relativism. The most eloquent argument is Mannheim's (1924). He argues that absolutes do exist in social phenomena--but that they are absolute only for a finite time or a specific place. "The Absolute is itself in a process of becoming; it is itself spatially bound...There are no formulations (Forderungen) which are valid for all times, but rather the Absolute reconstitutes itself in a new, concrete, form in every age" (Mannheim 1924, pp. 56, 58). Thus the "individualizing observation" which is to be the goal of Historicist analysis does not preclude generalizations, even lawlike generalizations; it merely means that these are transient.

6. Social knowledge is ultimately non-cumulative. Obvious though unstated in the classical works of Historicism, this point has recently been made forcefully by the historical sociologist Bendix (1984, p. 9). Within an historical era and/or specific culture, research findings may very well cumulate. The inevitability of fundamental change, however, means that after some time--or contemporaneously in another culture--they will no longer apply. Hence they are ultimately non-cumulative. Research findings in the natural sciences, on the other hand, can be cumulative.

Goals of Historicist Analysis

The goals of Historicist analysis flow logically from the philosophy's assumptions and beliefs about the social environment. There are three major goals:

1. Social science should focus its attention upon concrete social phenomena rather than upon the search for universals. By concrete social phenomena is meant phenomena which are temporally and spatially specific. 19th-Century Historicism usually treated the nation as the basic spatial unit. But there is no reason why other spatial demarcations such as regions or cities could not be employed. The basic temporal unit could be any time period.

2. Social science should strive to elucidate the ethos of social systems--their distinctive guiding principles and characteristics. In attempting such elucidation, the researcher has to keep in mind that systems are ever-evolving and that they are more than the sum of their component units. The whole and the parts of social systems exist in a dynamic relationship with one another; the distinctive overall ethos of each system is immanent in each of its components as well as the whole (Troeltsch 1922, pp. 69-73).

If analysis is successful, it will penetrate to and succeed in explaining "the innermost structure of this perpetual flux" which characterizes every social system (Mannheim 1924, p. 4). Often the "innermost structure" of a system will consist of a major cultural or other motif--"aggressive consumption" for example--whose process of development can be traced and under whose influence other compo-

nents of the system can be shown to have developed. The process of discovering a system's inner structure encourages a creative yet disciplined and critical approach. Such European-originated analytical tools as hermeneutics and semiotics are ideally suited to the task because they permit one to infer a great deal of meaning from discrete phenomena. Our now-conventional approaches, on the other hand, favor extreme restraint in interpretation (See Troeltsch 1922, p. 84). They would have difficulty in detecting the uniqueness which Historicist philosophy believes to mark the inner structure of each social system. Similarly, Historicism prefers verbal to mathematical representations, since the latter tend to blur unique characteristics and to imply greater similarity among phenomena than actually exist. One regression equation looks too much like every other.

3. Social science should strive to explain the process(es) of development and change in social systems. Since change is the core reality of all social phenomena, they cannot be understood in any meaningful way until the process by which they have developed--changed--over time is made clear. Analysis of a system at a single moment in time is by itself of slight value; analysis which ignores the development process is of even less value.

Much Historicist work envisions the development process as following one of three general models--the dialectical model, the organic model, or the teleological model. In the dialectical model a system is believed to evolve as opposed tendencies which emerge from an earlier system clash then form a new synthesis, which is the system. In time, however, the new synthesis will itself shatter into opposed tendencies. In the organic model, which was more popular in the 19th-Century than later, systems are envisioned as growing and eventually dying analogously to plants. In the teleological model change is seen as progress towards some fine and predestined end. Of these models the dialectical is by far the most powerful and useful. It has been and continues to be employed to good effect by European social scientists.

The Contrast With Logical Positivism/Empiricism

Both the philosophical underpinnings and the research goals of Historicism are radically different from those of Logical Positivism/Empiricism. Historicism challenges such core tenets of Logical Positivism/Empiricism as: the possibility of universal laws and law-like generalizations, cumulative social knowledge, intersubjective certifiability and researcher objectivity, and empirical testing as decisive. The major differences between Historicism and Logical Positivism/Empiricism are explained in Table 1.

TABLE 1
MAJOR DIFFERENCES BETWEEN HISTORICISM AND
LOGICAL POSITIVISM/EMPIRICISM

Historicism (Mannheim 1924; Meinecke 1972; Oexle 1984; Troeltsch 1922, 1923)	Logical Positivism/Empiricism (Hunt 1983; Peter and Olson 1983)
1. All facets of the social environment are in constant and complex flux; hence, any generality or law about social phenomena is ultimately ephemeral. Underlying relationships among key variables are as unstable as the key variables themselves.	While flux is undeniable, eternal and universal realities do exist. These realities can be expressed as generalities and laws which apply everywhere and at all times. Underlying relationships among key variables in the social environment can be stable.
2. Social knowledge is ultimately non-cumulative since change will inevitably render earlier findings obsolete.	Social knowledge can be cumulative; where underlying stability exists, findings from one time and place can apply to others, hence cumulate.

TABLE 1 (Continued)

Historicism	Logical Positivism/Empiricism
3. Social analysis must confront and focus upon complex change over time. Social science should strive above all to elucidate processes of change; this can be done rigorously and critically without mathematical and categorical approaches.	Time and complex change are messy, and focusing upon them leads to messy analyses requiring imprecise verbal treatments. Thus, time and change can be assumed away in some analyses, and assumed to follow known and regular patterns in other analyses.
4. Social science requires continual researching even of ostensibly similar phenomena--research must go on in perpetuity because the social environment changes continually but often in complex and unforeseeable ways. New research has to keep re-evaluating existing as well as building new knowledge.	Eventually many areas will require little if any further investigation--they will be fully understood and the understanding will apply to all times and places. Such results will not require re-evaluation.
5. Social science should explicitly recognize that different times and cultures are unique. Choices of research topics should reflect this. Extra-temporal and extra-spatial conclusions should be shunned.	While social science may deal with different times and cultures, and cite their differences, the ultimate goal of social science is the derivation of universal laws. Such laws are perforce extra-temporal and extra-spatial.
6. Social analysis should synthesize empirical knowledge and non-empirical insights resulting from thinking. It should recognize the importance of creative and multi-faceted interpretation. It should recognize that the mental structures by which we interpret data are an integral part of any reality involving that data. Empirical data alone are meaningless.	Social science should decompose social phenomena into empirically investigatable units. Interpretation of results should be restrained--nothing which is not empirically demonstrable--preferably with rigorous mathematical tests--can be acceptable. Our mental structures are distinct from the empirical world and their intrusions into social science must be distrusted.
7. The discipline of History should be utilized, both in its essential subject matter of time and change and in its use of multiple research paradigms. Philosophy can also provide guidance. The natural sciences are less useful as guides because their subject matter has little in common with that of social science.	Natural science is the exemplar to be followed, with Physics as the sine qua non for social research. Experimentation and quantification are essential. What applies in the natural sciences must apply in the social sciences. Failure to achieve similar results indicates the inferiority of social science.
8. Researcher objectivity and intersubjective certifiability are chimeras--they cannot be achieved. Though partisanship should be avoided, the investigator is always and inevitably involved with his/her subject matter through the use of his/her mind. Minds cannot but reflect some personal beliefs as well as common beliefs of one's time and place.	Objectivity and intersubjective certifiability are crucial to good social science. They are achievable goals: the investigator can be a pure and timeless vessel through which undistorted results may be discovered. Since other investigators in the social sciences can be the same, they will be able to evaluate results objectively.

For those trained in Positivistically-oriented disciplines Historicism can be extremely disturbing if its full implications are considered seriously. Actually, they are disturbing even to scholars grounded in non-Positivist fields. "No intellect, however hard working, however profound, can take it in an ultimate and definite form," writes one of Historicism's most able interpreters (Croce 1941, p. 78). Even some of those who developed the philosophy took refuge in an occasional universal (Croce 1941, pp. 78-79). But even if we cannot or will not accept Historicism's full implications, we should recognize that its emphasis upon confronting complex social change offers a valuable counterpoint to the inadequate job which our Positivist social sciences do with social change (See Fullerton forthcoming). Historicism shares some of the ideas of the contemporary philosophy of Relativism/Constructionism (Peter and Olson 1983), but offers both a stronger rationale for these ideas and richer analytical possibilities.

Implications for Consumer Research

Historicism has significant implications for consumer research, both in its philosophical assumptions and its research agenda. Historicism provides a profound philosophical challenge to the received views of most present-day consumer researchers. It is beyond the scope of this paper to determine the ultimate correctness of each of Historicism's differences with Logical Positivism/Empiricism. Certainly the Historicist thrust is buttressed by a growing body of work in the history of consumption (e.g., Elias 1978; Fullerton 1979; McKendrick, Brewer, Plumb 1982). But our intent here is not to review this work; it is to stimulate serious reflection about Postivist assumptions--and the kinds of scholarship which they engender. Are consumer research results really cumulative, for example? Are they generalizable across time and cultures? Historicism encourages the questioning of prior work--both conceptual and empirical--before it is accepted as currently applicable. By "prior" is meant any earlier results, even those from a year or two previously.

Similarly, Historicism suggests that results from one culture have to be critically scrutinized before they are applied to other cultures. Historicism stresses the uniqueness of consumer behavior in each culture, even at the same point in time. It implies that many of the North American findings may only apply to consumers socialized in the advanced capitalist economies with their deeply-rooted but ultimately transient obsession with "aggressive consumption".

Historicism suggests a whole new vision of consumption. In this vision consumer behavior is clearly:

- a complex historical phenomenon, subject to intricate and often fundamental changes over time and across spatial and/or cultural units;
- a phenomenon best conceived of as consisting of diverse consumption systems, each held together by its own core values, and each with its own historical individuality;
- a phenomenon for the understanding of which many of the approaches developed by the natural sciences are irrelevant.

To probe this vision of consumer behavior we can utilize but also go beyond the now-conventional focus upon information processing and attitude formation. Techniques for studying attitude formation, for example, can be applied to the examination of how core values develop and change over time. Historicism calls for a research agenda which will eschew the search for timeless universals of consumption behavior and concentrate instead upon individual consumption systems. The Historicist agenda calls for research into the ethos of consumption systems. Such work could employ among other methods the advanced techniques of qualitative analysis which are now available and which are being used by some consumer researchers. Historicism calls for research which will probe deeply into the pro-

cesses by which consumption systems evolve over time. To realize the considerable potential of the Historicist vision consumer researchers should work towards substituting a keen and sophisticated awareness of time and change for the indifference towards and avoidance of these demonstrably crucial elements of social life which characterizes current scholarship.

Historicism is a different way of thinking. It can be disturbing. On the other hand, it represents the highly developed intellectual tradition of classic German social thought. Seriously neglected by Anglo-American social science for the past half century, this tradition has the potential to enrich our understanding of consumer behavior in our own time. Thus whether we want to or not, we should come to terms with Historicism.

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HISTORIOGRAPHY, SCIENTIFIC METHOD, AND EXCEPTIONAL HISTORICAL EVENTS

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ABSTRACT

Historiography has not produced a single method but different traditions, and there is much disagreement about the use of history in social science. This paper discusses some of the philosophical issues regarding the historical method, and proposes an approach to the use of historical evidence in constructing and testing scientific theories.

INTRODUCTION

Historians and philosophers, as well as other social scientists, have regularly made use of historical evidence to develop their theories and positions. They have also frequently used historical facts and events to assemble support for their arguments, viewpoints, and theories. Throughout the history of such practice, however, two major streams of thought have clashed. One tried to establish a science of history by developing "respectable" rules and techniques of recording and analyzing historical facts (Collingwood 1956, Dray 1964). The other challenged not only the possibility of a science of history (Stone 1979, White 1973), but even the utility of history in human life (Levy-Strauss 1963, Popper 1962).

Recent discussions on the scientific method, spurred by criticism of Popper's falsificationist approach, and of the positivist/rationalist method in general (Feyerabend 1975, Kuhn 1977, Lakatos 1978), have created renewed interest in the role of history in science. Empiricism, realism and relativism, three major approaches to science, all have developed their perspectives--sometimes more than one--of history (Iggers 1984). The purpose of this paper is to investigate the methodologies of historiography, discuss their relevance for the different approaches to science, and through a critique of these methods and approaches, attempt a formulation for using historical evidence for scientific purposes.

TRADITIONS OF HISTORIOGRAPHY

Whatever the tradition of historiography, the historical method represents induction over deduction, and the specific or the individual over the general. There is an agreement among the historians that each historical period and context has its own account of the causes and reasons why events occurred. These cannot be reproduced, and therefore, are not generalizable. One must treat each event in history as unique, within its own specificity (Iggers 1984).

The Annales tradition in historiography could be considered to be closest to accepting the possibility of some level of generalization from historical evidence. Annales has been identified as the empirical-analytical school of historiography. It is built on the efforts of renowned French historians whose aim was to "understand" the past. This "understanding" was a task of causal explanations for these historians. Their purpose was to develop a set of methods in gathering and analyzing historical data. As such, they tried to bring scientificity and respectability to history. They believed that the understanding of history was the basis for understanding humanity.

Other traditions of historiography represent levels of critique and approach from a hermeneutic perspective. They stress the impossibility of understanding the past directly, without the interruption of "interpretation" based on the perspectives and the consciousness of the present. Therefore, in phenomenological research, for example, the understanding of consciousness becomes the primary objective (Husserl 1962). In the cultural history tradition, one must try to understand the culture of the time in order to be able to know the facts that are documented. Documentation, after all, involves the process of how the specific culture perceived the world and its facts.

In the hermeneutical perspective, understanding has a different meaning than it does in the Annales tradition. It is beyond causal explanation. One has to ask, once a causal link has been established, why it occurs. Causes are not sufficient to explain a phenomenon; to achieve true explanation, an understanding, one must know why causation is present. As Iggers points out, "...Fevbre emphasized that the "understanding" (comprendre) of social phenomena could never be reduced to immediate "knowledge" (savoir) but always involved an attempt to explain their relationships. The hermeneutical perspective, in fact, considers this level of "understanding" as explanation. True understanding requires that what is thus explained makes "sense" to the one who is receiving the knowledge.

In hermeneutics, therefore, understanding the past, or for that matter, the present, requires that the ideology or the consciousness be considered. Without consciousness, and the perspective that it instills onto the perceiver, no fact can be registered. Therefore, not only the culture of who documented, but the culture of the user of the document must be regarded.

Marxist analysis lies between the Annales and the hermeneutic traditions. Called historical materialism, the method of history in Marxism accepts the premise that reality is independent of thought, but that thought (consciousness), built upon the material experiences of human beings, interprets and biases documentation of reality. In this interpretation, due to the biases of experiences and interests, a "false" consciousness can develop. Furthermore, documenting the facts as they can be directly measured and operationalized can result in getting caught up with the appearances of things rather than their essences. Understanding requires, therefore, abstraction to draw from the concrete facts that which is essential. From these essences, one can arrive at theories which allow expectations of tendencies in events, none being deterministic, certain or completely reproducible.

APPROACHES TO SCIENCE

All historiographic traditions have been reduced to one by Popper (1962), called historicism, and attacked as tautological and deterministic. This is rather strange, since any reading of historiography as espoused by the great his-

torians of its different traditions define the substance and purpose of history as the very opposite of Popper's identification of historicism. In effect, Popper has created an image of historiography for himself and attacked his own definition of it (Marcuse 1972).

There are, however, several different traditions in the methodology of history, as discussed. The Annales tradition is the closest to positivism, the dominant scientific method approach in the social sciences today. This is due to the importance both positivism and the Annales tradition put on the empirical, concrete facts, measurable for one and documented for the other. This perspective on facts is indeed meaningful for causal explanation, or as I would consider it along with the critics of the Annales tradition, prediction.

Prediction and Positivism

Positivism, the scientific method which predominates our field of study, and the statistical analysis techniques upon which it relies heavily for "scientific" inferences, emphasize the common or, in other words, the norms and averages. As a matter of fact, one could call this tendency the accountancy of recurrences. In this perspective, that which has the highest number of recurrences has the greatest weight and confidence. This approach, as a result, emphasizes predictive validity. We have the greatest confidence in recurrence of what has occurred most often in the past. This is best represented by the averages, or in general, by measures of central tendency. Measures of central tendency, however, gloss over the variant characteristics, compiling all and representing them in terms of the norms. This is exactly why approaches of this kind are antithetical to both explanation and understanding. They can predict, but since the techniques used lack information on or evidence of underlying characteristics, they cannot provide the answer to why the central tendency in one variable is related to the central tendency in another.

Let me put this in plain language by providing a simple example. Take research on repetition and its effect on attitudes. We find that repetition of a persuasive communication, as well as many other stimuli (music, colors, etc.), causes more positive (or less negative) attitudes in the audience (Cacioppo 1979, Zajonc 1968). This, of course, is a conclusion we arrive at as a result of the differences in the means of attitude scale items. But, is this relationship true for all subjects in the sample? Is it likely that repetition may cause more negative attitudes for some (even if a minority) of the subjects? If so, repetition does not explain the change and its direction in attitudes. It only predicts the resulting central tendency.

One can understand, therefore, the criticism empiricist approaches to history and science get from those who perceive the purpose of science to be one of understanding. Causal relationships of the kind mentioned in the above example may be valid given that the underlying relationships and characteristics do not change. But with any change in the foundations upon which "apparent" relationships are built, the causal links lose validity. Prediction, therefore, can guide us only as far as essential changes do not occur. It is clear that such empirical approaches to science go hand in hand with philosophies of "history repeats itself," and "nothing really changes."

Realism and Historical Materialism

To be able to know why one event might have caused another, or to be able to explain what might happen to causal relationships when the conditions that produce them change, there is a need to recognize relationships at more essential levels. This requires abstraction from what is immediately observable or measurable. The basically realist approach in Bagozzi's (1984) holistic construal is an example of such recognition. Realism, as a scientific method approach is one "...that encompasses many of the features of Marxist explanation" (McLennan 1981). As in historical materialism, realism recognizes the possibility of misled perceptions of facts or observables, and that these misconstructions can bias the knowledge of what is real. While Marxist history builds a certain understanding of the historical process and dynamism of social change upon this recognition, however, realism, as a scientific method concentrates on rules of correspondence which claim to make the links between concrete observables (appearances) and abstract concepts (essences) valid.

Relativism, Cultural History and Hermeneutics

Relativism rejects the possibility of any correspondence between the observables and the abstract concepts to the satisfaction of all. Since nothing is conceived independent of the relative experiences of different individuals and cultures, and therefore, nothing can be generally real to all, there is not one but many realities. Cultural history reflects this approach to the study of historical events. Hermeneutics, on the other hand, is somewhere between realism and relativism in this respect. There is a recognition that there might be a reality independent of thought and consciousness, but it is highly questionable if this reality can ever be understood without interpretation. Meanings, which enable making sense of life and the world, cannot be achieved without interpretation and reflection (Gadamer 1976). The essence of life, transition from individual experience in society to encountering society, is possible only through such achievement of meaning.

The brief discussions on the intersection between approaches to science and the traditions of historiography avail to us a foundation upon which we can build a formulation for using historical evidence for scientific purposes. The discussion has brought out several essential issues pertinent to an understanding of science and history.

SCIENCE AND HISTORICAL EVIDENCE

It has been espoused throughout the history of science that the scientific purpose is one of understanding. There were, however, different purposes expressed for this understanding. Curiosity, control over the environment, control over events that affect society at large, and indirectly, the individual, have been some of these purposes. Knowledge may allow realization of all these purposes, but only understanding, that is, making sense of what is known, allows the conception of the purpose itself.

For understanding, in the hermeneutical sense, first some explanation of phenomena is necessary. As I discussed earlier, explanation requires knowledge of the variations in events rather than central tendencies. In history, the variations are the exceptions, and they present

the greatest potential for explanation. The rule, the general, can be explained by knowing what it is that allows the exception.

Let us turn to our example on repetition and attitude change, and assume that we investigate why, in contrast to the central tendency, some subjects do not change their attitudes or develop more negative attitudes following repeated exposure to a persuasive communication. We might find that these are subjects who had well rooted negative attitudes in the first place. This immediately produces several potential explanations of why repetition causes more positive attitudes. By further investigations of exceptions, these explanations could be narrowed down to one.

In the above example, of course, there is a possibility to incorporate into the process of seeking explanations methods, such as experiments, which are used in the positivist approach. Since these methods will give us only predictions based on central tendencies, however, the need for interpretation will always remain. No method should be excluded a priori from seeking explanation. But in the last analysis, no method gives us a definite explanation.

This is especially true for events too large for us to control and experiment with (Bendix 1984), or with events that cannot be repeated (McLemore 1984). Consider, for example, the transformation from agricultural to industrial society, or the roles that men and women have come to play in society. These are events that cannot be replicated for research purposes, but each is extremely important for an understanding of human life today. The positivist approach cannot, by investigating the rules and the central tendencies, tell us much other than that these did occur. We can only get a description of the phenomena, but no explanation, and therefore, no understanding.

Understanding of the historical process in such instances can be achieved by recognizing the exceptions and interpreting them in light of other evidences which are dialectically related to the exceptions. This is the method which principally was used by Darwin in developing his theory of natural selection. He recognized the exceptions in the species and interpreted them in view of the fact that different exceptions occurred in different environments. Einstein recognized the exception in rules of geometry beyond limited regions of space and interpreted it in light of the puzzles of his day, namely, constancy of the speed of light and the meaning of moving (Zukav 1979).

What was common and a rule would not have allowed such insights. These insights are in the domain of discovery, but their justification for an understanding can also only occur through the interpretation of exceptions, and not by accounting the norms. Remember that we justify Einstein's theories by testing expectations it produces, such as the time difference measured in clocks in space and on Earth. What that difference means is only understood through its interpretation based on our knowledge of Einstein's theory.

Similarly, we cannot understand the role that women have come to play in human society and explain the reasons to enable understandings by repeating the common experiences of men and women in history. To understand, we must seek the exceptions and interpret them in light of other historical events. We must consider the

island of Kanhabaque where the roles are switched, and by recognizing the potentialities beyond the common, enlarge our pool of meanings to capture horizons we could not do so before.

CONCLUSION

The dominant contemporary method in science, and similarly, the dominant contemporary tradition in historiography, both of which depend upon the collection of empirical facts and repetition of common occurrences, can describe events and history for us. This may be beginning of knowledge and foundation of raised curiosity. However, these approaches are not sufficient for explanation, or, in its true sense, understanding. For understanding, interpretation is an imperative. Interpretation, however, can be problematic due to the biases of perspectives gained on the basis of past experiences, interests, and values. The inquisitive and scientific mind can find some relief from the perils of interpretation by a continuous questioning of the common occurrences, and by putting what is common to the test through examination of exceptions for a new understanding.

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AN HISTORICAL PERSPECTIVE FRAMEWORK TO STUDY
CONSUMER BEHAVIOR AND RETAILING SYSTEMS

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Abstract

The purpose of this paper is to develop a framework of retailing system evolution in response to changing consumer behavior patterns. The historical comparative method is employed to this end. This method can help remedy some increasingly criticized limitations of current logical empiricist theory-building in marketing and consumer research.

Method Choice in Marketing and Consumer Research

Recent criticisms of marketing theory, (Arndt 1981), in general, and of consumer behavior models (Firat 1985) or comparative distribution channel systems (Kumcu 1985), in particular, concentrate to a great extent around the following points: 1. Neoclassical economic theory and positivist paradigms are the dominant paradigms in marketing. Therefore, the studies have an unconscious yet pervasive ethnocentric and a dominant managerial-predictive orientation; 2. Buyer, not consumer, behavior is studied in consumer research; 3. The findings of methodologically different studies are generalized across time, space, and economic sectors or societies, thus abstracting events and behaviors from their historical and cultural context.

In order to overcome problems stemming from the theoretical and methodological issues, an historical method is proposed to be used in marketing theory building (Savitt 1980 and 1984, Kumcu 1985). The perspective of the historical method could be used in the study of the events and activities of the past in order to understand the present circumstances, i.e., studying marketing phenomena in light of their past. This is not merely describing the events in their chronological order or studying these events to understand past attitude or behavior (Kumcu 1985, see also Lawrence 1984). This method permits a substantial description of change as well as the means for understanding and explaining the change process. Such an approach would be employed, for instance, if one uses the historical economic and social data about the 1930s and the emergence of different grocery stores to understand and explain the problems of introducing new retailing systems elsewhere today.

This paper employs historical and comparative methods to help develop a well-founded framework to study how and why consumer's behavior affects the retailing systems and vice versa. Hopefully, such a study will contribute to our understanding of the relationships between consumer behavior and emerging retailing systems as well as provide a better understanding of the influence of the mechanism of these variables on each other.

A Critique of Theories on Retailing-Change

The primary purpose of retailing-change theories is to describe the present status and predict the future patterns of retail development. To accomplish this task, these theories define stages through which the retail establishments can be expected to pass during their lifetime -- emerge, grow, and finally decline and "die." These theories are presented as if the process is uncompromisingly determined by some uncontrollable factors, and valid in all industries, societies, and at all times. Therefore, among other applications, the retail change pattern is being related to economic development.

As Bartels (1981) points out, this theory depicts "that economic development is determinant of a number of actions and conditions in marketing. From this it is deduced that with industrialization, economic systems and personal

behavior in developing countries tend to become like those in already developed countries" (1981, p. 23, emphasis in original).

In this method, the available information from different countries that observe different development levels are aggregated. Then, from this it is deduced that the phenomena experienced in the U.S. will occur elsewhere. Methodological and logical problems of such works are reviewed by El-Ansary and Liebrez (1982). Some authors contend that the marketing systems in those countries will and/or ought to look more like the North American structure. Consequently, they recommend that institutions and marketing practices of advanced countries should be introduced into other economies (Cundiff 1965, Slater 1965, Wadinambiaratchi 1965).

Influenced by the stages of the economic development model of Rostow (1969), this literature implies that all economies are likely to move through the same stages as they develop, and that a country or industry moves strictly from one stage to the next through time.

Further, the paradigms used are a product of, and are culture-specific and context-bound to the North American environment and economic conditions (Dholakia, Firat and Bagozzi 1980). Consequently, this literature implicitly assumes not only a cultural and economic similarity between various countries, but also a parallelism in their historical and future development - a fact that is highly doubtful (Kumcu 1985). The marketing literature offers many examples showing that diverse social and cultural environments shape and limit institutions' structures and their relationships differently (Boddewyn 1981). Indeed, developing nations that started from different bases are growing in a quite different environment than the industrialized countries. Further, they seem to follow mostly different socio-economic development paths.

As this discussion illustrates, the logical empiricist use of the temporal models, such as the stages of economic development model as assumed and applied in marketing, are a misrepresentation of reality and create more confusion than understanding to the solution of retailing development problems.

An Historical Method Framework

As a social institution, retailing systems are formed and transformed through the interaction with their environment. Therefore, they appear in various configurations in different societies and at different times in the same society. However, the simplistic and deterministically mechanical explanation by retail-change theories fails to see the retailing change phenomenon as part of the integrated social, cultural and economic whole of societies (Markin and Duncan 1981, p. 61).

In contrast, the historical method, with its holistic approach, inductive reasoning, and context-bound perspective, can better explain many of the problematic issues in retailing and consumer behavior.

For the purposes of this paper, I will approach this problem through a conceptualization of four sets of variables:

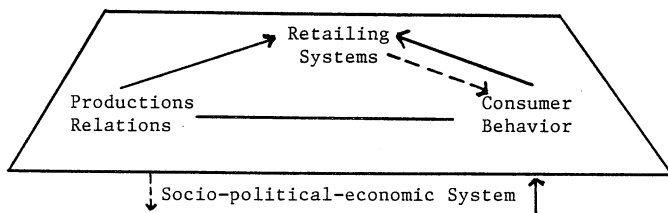
- (1) Production relations through time,
- (2) Evolution of consumer behavior,
- (3) Formation and transformation of retailing systems,

(4) The underlying social, cultural, political and economic structures and their historical evolution.

The relations proposed from a historical perspective regarding these variables are depicted in Figure 1. This framework is based upon various premises: First, marketing systems attempt to satisfy consumption needs and wants of consumers and/or societies through exchange transactions (Bagozzi 1975) as well as other modes of want satisfaction (Enis 1973). Second, retailing system formation and transformation rests primarily on social relations. That is, the changes in retailing systems can best be understood in terms of the tensions and contradictions between the units of the system, and the production relations in the society. Finally, to understand these changes, the link of historically/contextually specific marketing phenomena must be established with general socioeconomic, cultural, political and historical processes in the society. Note here that the time dimension is an integral part of the framework.

FIGURE 1

A FRAMEWORK OF CONSUMER BEHAVIOR AND RETAILING SYSTEMS



The framework in Figure 1 depicts a society's prevailing socioeconomic, political and technological systems, which determine the production relations, consumer behavior and retailing systems. It is important to note that this determination is not a one-time action, but rather a continuous process. Indeed, the needs, values, goals and interests of the market participants, such as consumers, manufacturers and distributive organizations, are defined by the value systems, institutionalizations, and the use of resources through time.

Consider that a "sudden" change in the political system of a nation has little influence on other systems in the short term. The new political authority needs time to alter the prevailing production relations, consumer behavior, etc. The low success rate of military governments illustrates that it is extremely time consuming to alter system structures, processes or behaviors.

Other environmental forces have similar impacts. The technological level of a nation defines the respective variables in the framework. Consider, for instance, that for a new technological application such as personal computers it took over five years to impact consumer behavior and retailing practices. Now, in technologically advanced countries, personal computer technology may play a determinant role. In other countries, traditional technology will continue to influence consumers and retailers.

The effect of these contextual and historical forces should not be generalized throughout a society. Different sections of a society may be influenced in different ways.

In a given socio-political context and history, production relations are important to the extent that they shape and limit the retailing systems as well as the historical context (Figure 1). The production relations in this framework demonstrate how the society organizes the production and how it controls the production means. Also, the nature and volume of production are critical in these relationships. The production relationships are dynamic and are influenced, in turn, by the consumers and transformation of marketing systems. The broken feedback

arrows in Figure 1 reveal the reciprocal nature of the relationships among these variables.

The organization and ownership of production means have different facets in different societies and evolve in various ways. In rural areas of many developing countries, farming is still at self-sufficiency levels. Production means in many centrally-planned economies is controlled by the government. Indeed, in each of these cases, consumers develop appropriate behaviors. The retailing systems evolve correspondingly.

Consumer behavior is, to a great extent, shaped by the production relations. Consumer income levels and its distribution, demographic, social, psychological characteristics, and consumption patterns take different dimensions under various conditions. At a given time, consumers in various societies may have extremely different characteristics which influence the retailing systems. To understand, e.g., the decline of the traditional department store, in addition to its lack of adaptation to other environmental changes, one necessarily must observe the change in consumption patterns as well (Gist 1968, p.85-86).

Certain changes in consumer behavior may be encouraging for some retailers and discouraging for some others. The increasing use of automobiles for shopping purposes is beneficial for suburban retailers. However, transportation forms have had adverse effects on downtown shopping centers. While a general income increase is desirable, its unequal distribution has contradictory results on different retailers. Different combinations of consumer characteristics may have totally different impacts under various contextual and historical conditions.

Formation and transformation of retailing systems, therefore, is determined by specific forces. One has to be extremely cautious to link them with general or macro indicators of economic development. It is not by accident that in retail practice, the innovations are introduced in small steps. It is generally agreed that retailing is an "industry" that must demonstrate high adaptability to circumstances. Revolutionary innovations have no room in retailing.

The success of new retailing technologies such as home shopping, home banking, mass retailing, etc. depend heavily on how much they will gain acceptance by the consumers. These new retailing forms may attract the "innovative" consumers to some extent; but the majority of consumers are not innovators.

In fact, the question is not to introduce or recommend technologies, institutions or structures which appear the best normatively, but rather to find out what the necessary conditions are to permit certain retailing systems to emerge.

Conclusions

Questioning of the logical empiricist paradigm in marketing and consumer behavior is conducive to introducing new paradigms. Among others, historical method framework offers a viable and relevant alternative perspective for marketing theory building.

The implementation of this framework, linking consumer behavior with retailing system evolution in their historical context, will aid in anchoring the formation and transformation of retailing systems to their historical origins. Further, it will bring the contemporary state of retailing systems in different parts of a country or of the world into clearer focus. For this purpose, the framework should be used comparatively, thus permitting a more relevant generalization. Finally, relevant retailing technologies and systems will be introduced with higher success rates. These, in turn, will help shape relevant public and managerial policies for domestic and international retailing.

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COMPARATIVE HISTORY AS A RESEARCH TOOL IN CONSUMER BEHAVIOR

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Abstract

People have been consuming, and thus manifesting various forms of consumer behavior, for a long time. Recently, consumer behavior researchers have urged an increase in the variety of research tools regularly deployed in their discipline. This paper highlights data sources and a technique of historical comparisons which could potentially enrich consumer behavior theories and concepts.

Introduction

Speculating in 1940, on the nature of a discipline of consumer behavior, Roland Vaile posed the question, "Is there a science or discipline of consumption?" His answer was that "any such discipline must be a matter of synthesis, eclectic in the extreme." Further, the discipline would "include evidence from...physiology and genetics, physics and chemistry, psychology and neurology, economics and political science...engineering and dietetics, painting and music, banking and advertising." (p. 50) More recently, however, scholars lament the eclectic borrowing of concepts and constructs (see Mittelstaedt 1971, Sheth 1979). Among other things, Sheth (1979) blames this type of borrowing for what he views as the present "shortages" in consumer behavior.

Leading consumer behaviorists have proposed various solutions to what is viewed as the narrow focus on the individual, on cognitions, on psychological constructs, econometric techniques and on choice models (Sheth 1979, and others). One approach has been to move into the arena of affect as opposed to cognitions (see Zajonc and Marcus 1982, Gardner 1985, Rook 1985) and to focus on such topics as mood states (e.g. Gardner 1985), ritual behavior (e.g. Rook 1985). While this research has added a social dimension, it has tended to be primarily focused on the individual. Other consumer researchers have sought to achieve triangulation by adding historical-behavioral concepts to the normally cognitive-psychological approach. Hirschman (1985), Belk (1985) and Sheth (1979) all call for more macro theories of consumer behavior. A variety of authors have called for the infusion of more historical work (see Rassuli and Hollander forthcoming, Hirschman 1985, Kirkpatrick 1983, Savitt 1980). Finally, Arndt (1985) calls for more comparative studies in marketing.

The usefulness of comparative marketing studies, as a method, to build marketing theory (Arndt 1985, Boddewyn 1981, 1966, Buxton 1973, Cox 1965, Shapiro 1965), to refine marketing concepts (Wind and Douglas 1981) and to make distinctions between universal, related and unique concepts (Boddewyn 1966, Arndt 1981) has been well-documented. Although comparative marketing is generally confined to the realm of international marketing and development, the term can equally encompass historical comparison. Boddewyn (1981, Arndt 1981) for instance, define comparative marketing as "the systematic detection, identification, classification, measurement, and interpretation of similarities and differences among entire national systems or parts thereof." One could conceive of the national systems being separated in time and thus extend comparative marketing to the realm of history.

Recently, historians of various backgrounds have taken an interest in the topic of consumption (see Rassuli and Hollander, forthcoming for a review). The historians' work provides an excellent foundation for a comparative study of consumer behavior. The purpose of this paper is to demonstrate the use of comparative history as a research tool in consumer behavior by focusing on the kinds of research problems comparative history can illum-

inate. We will do so, by drawing several examples from historical research. We hope to demonstrate that the technique of comparative history can be used to raise questions about our current conceptualizations and to provide insight into some unresolved questions in consumer behavior. Potentially, comparative history can be used to enrich theorizing in the field.

Data Sources for Comparative History

In 1960, the Library of Congress published a massive guide to the study of American life and affairs (Basler, Mugridge and McCrum). It listed almost 6500 "representative" books that reflected the entire American panorama. Only one title was indexed under any variant of the word "consume," Persia Campbell's excellent 1949 The Consumer Interest. Earlier, in 1934, Robert Lynd complained that a good 600,000 volume university library might contain no more than ten books on the ultimate consumer and that the bulk of those would have been written by marketers bent on exploitation. Even today, when an Association for Consumer Research can fill the salons of one of the largest and shiniest hotels in one of North America's most glamorous cities, the number of entries under "consume" in such standard scholarly finding guides as American History and Life and Historical Abstracts is miniscule compared to those for such historical staples as "railroads" or "industrialization."

So it would seem that the consumer historian simply must be a pioneer, blazing a heart-breakingly difficult trail through previously unexplored territory. But, the melodrama really isn't that grim. Sessions such as this and many others, the strong consumer history content of the marketing history conferences at Michigan State (advertisement), and particularly the growing amount of publication in the field testify to the market for consumer history. Moreover, the earlier literature is far richer than appears at first glance. The same Library of Congress guide that appears to slight "consume" offers five entries under "cost and standard of living," two under "fashion," five under "house decoration," and nine under "housing." There are also sections of the guide devoted to such topics as social history, sports and recreation, and entertainment. Both older and more recent histories of family organization and life, manners and behavior, food habits and customs and many other areas shed light on past consumer behavior. Recent output includes a large volume of works that deal with the historical aspects of the "culture of consumption," efforts to induce, shape and restrain consumption, and consumer behavior itself. Thus, data sources are available, although perhaps partially disguised under alternative titles.

The core of consumption history focuses on consumed goods and services. The basic two questions are: (1) What is consumed? and (2) Why? The first goes beyond a list of stockkeeping units, and asks about relative quantities or market baskets, both in total and by market segments, prices, and places and terms of sale. The second question asks about both environmental and motivational factors. The first question concerns the history of tangible and intangible objects, and thus is the objective side of consumption history.

The point of this observation is that material culture studies are a very good starting base for consumption history data. Many of the material culturists serve in the museum rather than the academy and much of the field has an archeological or, particularly, art historical approach. This approach focusses on the object itself, its identification, authentication and provenance and on locating and evaluating it in various design or aesthetic

traditions. But the study of objects inevitably leads to studies of their popularization, utilization and meaning, so the material culturists have been drawn into consumer history. An anthology such as Thomas Schlereth's (1982) Material Culture Studies will contain articles such as Ruth Schwartz Cowan's "The Industrial Revolution in the Home: Household Technology and Social Change in the Twentieth Century." (Material history seems to have a special relationship to feminist history; see Delphy 1970). Although using contemporary standards and tastes to judge older objects can be misleading, tangible and intangible artifacts do emit messages of formality and informality; work, leisure and status; desire for ostentation; concepts of privacy and utility. While we in marketing and consumer behavior need to get closer to the actual artifacts to appreciate changing and varying selection criteria, the material culture specialists have come closer to our type of work. Useful finding guides are Schlereth (1985) and pages 93-166 of Landrum (1982).

Closest to the objects themselves on a primary-secondary data scale (Savitt 1980) are the documentary materials that arose from their offering, purchase and use. Nineteenth and twentieth century history makes good use of contemporary advertising (see sources cited by Pollay 1986). At a popular level, David Cohen's (1940) Good Old Days is based almost entirely on old Sears Roebuck catalogs. Many other such catalogs are available or have been reproduced and most universities received a microfilm collection of Sears' catalogs as a gift from the company some years ago. Other material close to the source includes store records, estate inventories, wealthy individuals' instructions to agents and stewards concerning items to be acquired, letters to friends, diaries, particularly those of ardent shoppers contemporary "manners books" or etiquette guides, travel books, and household advice books and articles.

For the service sector, many sorts of paper trails remain as a good data source, again especially for relatively recent periods. Some of this paper is in museum collections and dealer inventories. We refer to theater and athletic event programs, banquet and restaurant menus, stagecoach, railroad and steamship schedules, tickets, and miscellanea; school curricula, dress codes, and possibly even yearbooks.

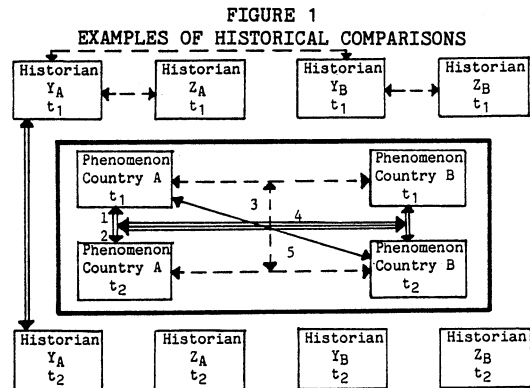
For those who do not fancy grubbing about dusty, indecipherable bits of paper in dusty locations with poor light, selections of these artifacts have been reproduced in numerous volumes and interpreted in various histories. Obviously, with any collection, self-selected or selected by others, there is the question of "representativeness" in the statistical sense of the word. Probably many collections are "representative" in an old-fashioned elitest sense, "the most imposing representative of the period."

Finally, as noted earlier, particularly in recent years, social, economic, and marketing historians, area specialists, mass communications scholars and others have been writing on consumer history itself. One difficulty is that much of this historical work, at least the portion with which we are familiar, has been done in the North Atlantic, English-speaking countries. Braudel, a Frenchman who has recently had a new English translation (1981), has been and undoubtedly will become even more influential. Professor Fullerton undoubtedly can tell us of German sources. Fortunately, some of the English-language books go beyond the Anglophone world. Rosalind Williams (1982) Dream Worlds (France) and Smith and Christian (1984) Bread and Salt (Russia) are two important examples. The recent ACR meeting in Singapore produced a number of Asian-oriented papers, mostly with relatively short retrospective time spans but hopefully leading to inquiry into earlier periods.

Typology of Historical Comparisons

Historical material, just discussed, provides a rich data source, upon which a variety of comparisons could

be based. Comparative marketing studies tend to compare either marketing practices in two (or more) countries or in the environments of the countries, or both at a single point in time. The level of analytical complexity can be increased by adding a time variable. Concurrently, the time variable can aid in eliminating competing hypotheses (although some historians would disagree with this use of history). Figure 1 helps to illustrate the point. The main purpose of the figure is to facilitate visualization of the possible comparisons; it is not necessarily intended to provide another framework for comparative research, which Boddewyn (1981) concludes is not needed. The conceptualization in Figure 1 is reminiscent of Bartels' framework for studying comparative international marketing (see Bartels 1963).



Focusing only on the top portion of the figure, one finds the typical, static cross-sectional studies -- a comparison of some marketing phenomenon in Country A and Country B. Here, when discussing a country, the label "phenomenon" could refer to any one of the following: a marketing practice, function, or channel; a consumer phenomenon, such as the "Consumer Society," or a prevailing social attitude toward consumption; a commodity; or one of the various relevant environmental factors. In addition, the phenomenon of interest could be at the level of the country or at a more limited level, such as classes of people, economic levels, membership (or other) groups, or some geographic subdivision of the country.

Or on the periphery, one could also compare competing historical explanations about the phenomenon in Country A versus Country B. The historian's explanation at t_1 should be thought of as a historical description of how, say phenomenon A, came to be as it appears at time t_1 . "Historian" could also represent a "school of historical thought." Moreover, the historians may differ with regard to either their choice of causes, effects and competing factors, (see Dray 1970) or their interpretation of what occurred may differ because of their differing perspective (e.g. anthropological historian versus a social historian). Consequently, in comparing historians' explanations one may find conflicting or complementary explanations, or successively deeper explanations.

By including time as a variable, the potential for a number of longitudinal comparisons comes to the fore. Time can be measured as calendar time or as some relatively similar developmental or historical phase. The following are some of the comparisons which could be made. (Numbers correspond to arrows in Figure 1).

1. Static Historical: Country A at t_1 with Country A at t_2 .
2. Dynamic Historical: Process (rate) that Country A moved from t_1 to t_2 .
3. Static Comparative History: Country A at t_1 and t_2 to B at t_1 and t_2 .
4. Dynamic Comparative History: Process (rate) that Country A moved from t_1 to t_2 with the process (rate) that Country B moved from t_1 to t_2 .
5. Historical Comparative: Country B at t_2 with Country A at t_1 . (Assuming similarity between B_{t_2} and A_{t_1}).

Historical Comparisons: Examples and Discussion

It is possible to use an experimental design framework at a macro level, as a heuristic, for conceptualizing the benefits of historical comparisons. While not insurmountable, the usual experimental design problems (e.g. equivalence of markets and interference of extraneous factors) are certainly present and perhaps compounded in historical comparisons. Historical periods can be thought of as the baseline and/or control group comparison in an experiment. If one were to begin with a static comparative study of two countries at t_1 , it is difficult to sort out the effects of the phenomenon of interest from its environment. According to Buxton (1973, p. 57) in international comparative marketing studies, "The most intractable problem would seem to be in the area of attaching values or weights to the relative influences of the environmental elements on the developments of a local marketing system." Using some typical consumer behavior/marketing issues as examples, a comparative historical remedy to this problem can be illustrated.

Consider, for example, the question "is desire (i.e. need/want) induced?" Great Britain and the U.S. are the "test markets." The experimental manipulation is the introduction of advertising. In both cases, spending on goods increases. But, without a base-line how can one judge the magnitude of the experimental effect? Likewise, without a control group, how can one determine if the effect is the result of the treatment or a result of some other environmental factor? Using historical periods, a certain amount of control can be achieved. For instance, country A at t_1 provides a pre-test for country A at t_2 . Prior to the introduction of advertising was there desire? Historical evidence would probably answer in the affirmative (e.g. sumptuary laws imply people desired the restricted goods, see Hollander 1984, Braudel 1981).

The study of fashion provides many examples. A recurring consumer behavior debate is that of relative influences on fashion. Numerous objects of dress and household furnishings, particularly those of the last few centuries, have survived as data sources, and are supplemented by many contemporaneous descriptions, fashion dolls (miniature samples), fashion magazines, personal correspondence and merchant records. Difficulties remain, of course, in determining the exact popularity of various styles, particularly among certain market segments and of isolating the forces behind the changes indicated by the evidence. But we think that limited and selected comparisons can support inexorable cycle theories of fashion change (e.g. Robinson 1975), while more general comparisons tend to invalidate them. Bell's (1976) illustrations support his view that male fashion became sober, and relatively unchanging when sober pursuits, such as business, became as honorific as military and athletic pursuits, and that the development of similar "dull" careers for women may have the same impact on their attire. The idea is worth pursuing. A large number of cases support various versions the "trickle-down" model (Veblen 1899, McCracken 1985). Trickle down implies super- and sub-ordinate relationships among consumers. A comparison of historians' views, shows that the phenomenon may be more complex than it was previously believed. Historians believe trickledown may also require a certain closeness (density and fluidity) of class relationships (McKendrick, Brewer and Plumb 1982). That is, the actions of subordinates copying superordinates' behavior must appear reasonable rather than palpably ridiculous. That, in turn, suggests two further insights. One is that people may engage in more status-claiming behavior i.e. "passing themselves off" in large than in small communities because of a greater degree of individual anonymity (Barth 1980). The other is Potter's (1954) more general point, that people only compete, either in consumption or in the attempt to acquire the means for consumption, when there is some possibility of success. Of course, trickle-down explains the progression of fashions, but not the selection of particular fashions by superordinates.

Although "trickle down" describes much fashion behavior at many times and in many environments, it has difficulty encompassing some situations such as the "sack" dress of the 1960s, or the popularization of jeans and T-shirts. Again, a look at other time periods for such "trickle up" behavior can be instructive. Some of these seemingly upward moving styles may be a sort of acting on the part of the supers, much like Marie Antoinette playing at being a milkmaid. Some may be evidence of elites outside the traditional Warnerian class pyramid. Comparative evidence, at least to date, still leaves in question the power of fashion manipulators (designers, publicists) but their varying fortunes suggest that the power of manipulators may be greater in the short than the long-run. And even though we reject immutable, almost astronomical cycles, some taste oscillation may well be a characteristic of life at a discretionary plane of living.

A somewhat analogous topic concerns the decline in dress-making and tailoring and the substitution of ready-made for custom-made objects. The supply-side explanation is the shortage of skilled workers at economically necessary low rates of pay. "Made-to-measure" was a compromise solution to the supply problem which used standardized patterns applied to personally selected fabrics. The result was an individualized garment, not at true custom standards, which required less labor input. The decline in demand for custom-made objects may be ascribed to risk reduction, desire for instant gratification and a desire to save time. Interestingly, made-to-measure enjoyed considerable popularity in post-war Britain (Burton the Tailor), in the popular price ranges -- which suggests status seeking on the part of these consumers. Further studies of custom demand and supply, for other goods would be instructive.

Jessica Mitford voices some, probably not unreasonable criticisms of recent American funeral practices in The American Way of Death. Here a comparison such as 5, could put these practices into perspective. Her Victorian British predecessors made much more of a show of mourning (Adburgham 1979, pp. 120-23). Mourning attire, etiquette book instructions on when it was permissible to add touches of white to black costumes, funeral cards, undertakers' advertising and bills and contemporary newspaper accounts of funerals provide grist for the historical mill, and leave the consumer historian with the problem of accounting for differences in the intensity of outward manifestations at different times and places.

Another relevant consumer question concerns, what some authors see as an increase in self-centeredness (or egoism) on the part of Americans (e.g. Lears' Therapeutic Philosophy in Fox and Lears 1983). True perhaps, but without a baseline figure, one might question the significance or the magnitude of change. Historical studies of the home (Braudel 1981, Rybczynski 1986) can provide at least some tentative and speculative insight. "Innovations" in the home, over the centuries led to increasing independence for individual residents. Included here are separation of production from the home, four poster beds with drapes when beds were still part of the common living space, and later individual bedrooms. The latter enabled members of the household to express their individuality. Therefore, one might posit that the egoism we are now witnessing is no greater in magnitude than in the past. Or additionally, that the current manifestation is simply part of some long run trend.

The topic of services and service retailing is enjoying a rise in prominence. Hollander (1980) concludes that people do not buy services per say, rather they buy particular services, each of which have their own histories. A comparative study of this history of services and products reveals that retail services have often been absorbed into the home through the addition of equipment. For instance, centuries ago in England, the poor who had no stoves, could patronize "bake shops" where they took their meat pies to be baked. Eventually, stoves replaced this service. Laundry services and

entertainment (e.g. VCR's) are contemporary examples. Alternatively, certain other aspects of services have been divorced from the home. Examples are education, production, medical services and religious instruction. A historical comparison of services absorbed versus those divorced from the home might be insightful.

Over time, there has also been a decline in the social functions which retailers perform. Further, store loyalty probably has been declining. Part of this decline may result from the increased share of the retail market by large scale retailers in all industrialized countries (see Hollander and Sheffet, forthcoming). Additionally, one might hypothesize that more affluent customers are more interested in using goods than in the acquisition process. The result of comparative research on this hypothesis could inspire research on the "roles of the buying process" (i.e. initiator, buyer, user, etc.). Moreover, there are also implications for studies of store loyalty and consumer satisfaction/dissatisfaction.

The often-stated belief (in the form of the marketing concept) that marketers discovered the consumer in the 1950s when the market became a buyers' market, provides another instance where a historical perspective can be enlightening. First, one might ask if the 1950s was the first time a buyers' market occurred. Historical evidence does not contradict George Burton Hotchkiss' (1938) statement that buyers' markets constitute historical normalcy. Converse (1959, p. 5) notes that after the panic year of 1873, overproduction "was a chronic problem. Given this comparative historical fact, then one might surmise that a good deal of marketing must have occurred in times past. Again history tends to support this fact. McKendrick, Brewer and Plumb (1982) treat Josiah Wedgwood as an example of a master fashion publicist. Hollander (forthcoming) also provides numerous examples. Moreover, marketing research is also not a product of the last fifty or sixty years. A comparison of other countries and other time periods would establish the practice at a much earlier time. Converse (1959) discusses Gale's research at the University of Minnesota around the turn of the century. Further, he states that the market analyses of Edward Atkinson anticipated "by some forty years the development of marketing research." (p. 5) Boorstin (1983, p. 534) notes that in the century following the invention of the printing press, the publishing industry was characterized by the "need and the opportunity" to estimate the size of the market for each book. Though Boorstin does not elaborate on the research techniques of publishers, the possibility of their existence is an intriguing area for future study.

Briefly, two other examples of comparative history are potential questions for future research. A comparative study of the bread riots of earlier centuries in Europe and elsewhere, could help put the consumer boycotts of this century into perspective. Adelman and Morris' (1980) study of the historical factors that contributed to the persistence of poverty in underdeveloped countries could provide the foundation for a comparison with the increase of wealth in more developed countries.

Summary and Conclusions

Whether one uses the objects, the paper trails, collections, or the actual histories, data for comparison are available. Inferences can be drawn about what was purchased and also, with some care, why it was purchased (i.e. consumer motivations). We set out to show the potential usefulness of comparative historical research. To the extent that comparative studies show us that desire for goods and services was present in earlier periods (thus somewhat less of an induced phenomenon) and that marketer performed "marketing" activities long before the formal inception of the marketing concept, these studies shed new light on old debates. For questions such as the "trickle down" phenomenon, comparative history helps strengthen our conceptualization by implying a combination of a number of socio-environmental as well as

psychological factors. On newer debates such as egoism, and the service encounter, comparative studies may provide insights into some relatively universal aspects of the respective discussions. Finally, with consumer boycotts and poverty, comparative histories can act as the inspiration for new theorizing and hypothesizing.

In conclusion, a comparative historical approach has the potential to infuse consumer behavior studies with macro, behavioral and societal concepts (that consumer behaviorists seek) while at the same time adding the richness and depth (Vaile believed part of consumer behavior) which result from both international and historical work.

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INSIGHTS INTO CONSUMER BEHAVIOR FROM HISTORICAL STUDIES OF ADVERTISING

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Our understanding of our contemporary consumer culture is often handicapped by our very immersion in it. Surrounded by trees we can only dimly perceive the shape of the forest. This is not much of a problem in studying the consumer in microcosm, but we poorly study the context in which consumers operate, the consumer culture in gestalt. While many of the managerially significant questions can be (at least partially) addressed through study of the consumer in microcosm, the socially significant questions cannot. Generally speaking the more meaningful the issue, especially to those beyond our discipline's managerial bounds, the less valuable is conventional consumer behavior. History is one of (hopefully) many alternative intellectual approaches which offer important supplemental perspective on consumer behavior.

The realization of this potential of historical methods can be illustrated through the methods and conclusions of recent studies in the history of advertising. Three such studies will demonstrate both a diversity of documents studies and a diversity of inferences that can be drawn. The oldest such study is Curti's (1967) analysis of the changing concept of human nature held by the advertising trade from 1890 until the post-war period. This analysis is based on careful reading of the texts, professional journals, and trade papers such as Printer's Ink. Recent work by Marchand (1985) illustrates, for the 1920-30s, the richness of insights derivable when careful analysis of the content and tableaux of advertisements is supplemented with information from archives, trade press, biographies, interviews, etc. Leiss, et al. (1986) conducted a content analysis that benefits from its intellectual eclecticism. Rooted in the field of communication studies, the core concepts are drawn from anthropology, as the authors delineate the changing relationship of Americans and their goods.

These three papers vary in the way that they rely on and reflect: a) the theory about consumers guiding the production of marketing's most visible and vibrant tool, advertising; b) the culture of the organizations producing these ads; c) the ads themselves, and d) the culture of consumption. Each of these handles on history has some value. Let us consider each of these studies after a quick overview of the literature of historical aspects of advertising.

Some History of Advertising History

Not so long ago, many authors expressed dismay at the paucity and quality of major works discussing advertising's history and influential role in modern industrial society. Since then we have gone from famine to feast. In the past very few years there has been a sudden wealth of high quality books written by very capable and insightful historians. Barnow's The Sponsor (1978) discusses the modern television age. Pope's The Making of Modern Advertising (1983) describes the emergence and institutional development of modern agencies and practices at the turn of the century. Fox's The Mirror Makers (1984) uses a group biographical approach to capture the development of various schools of advertising practice and thought, and Schudson's Advertising, The Uneasy Persuasion (1984) is a sociological view which sensitively covers the agency client relationship and its constraints. But except for Schudson, few of these works dealt effectively or at length with the social content and cultural influence of advertising. While often fascinating and colorful in the characters, campaigns and conflicts described, both marketing scholars and historians missed a comprehensive discussion of the culture of consumption and the role advertising played in the emergent culture of abundance.

Perceived "Human Nature"

The first, and for a long time only, historical study of advertising of relevance to consumer behavior was Curti's (1967) analysis of the changing concept of human nature held by the advertising profession. Judged by study of the texts and trade press, the observed changes are provocative but a little uncertain in their interpretation. In general he notes an evolution from a "rational" view to a "dim/irrational" view, but how this is to be interpreted is debatable, through no fault of his.

The observed changes can be obviously taken at face value as exactly what they are, the models employed by the makers of advertising. Beyond that, however, it is not clear if the changes in these models reflect: a) the changes in academic psychology, b) the increasing realization of the potency of advertising to change consumer behavior and guide choices, c) the evolution of the professional, knowledgeable craft of copy writing as distinct in its craft knowledge from media placing, the preoccupation of the previous era of advertising, or d) actual changes in the nature of consumer behavior over this time span, as the mass markets went from subsistence to affluence. The root of this uncertainty is the chicken and egg conundrum that always confounds discussions of advertising, that of what is cause and what is effect in observed changes. Are the actual consumers changing (much) over this time span, or is it just that advertisers are slowly becoming aware of the way people are (and have always been)? To what extent can observed changes be attributed to just expanded awareness about consumer behavior, versus true changes in that behavior? Since advertisers have always been highly motivated to comprehend consumers, and have many financial resources at risk and to bring to bear on this issue, presumably it has not taken them 80 years to comprehend what was always true. Presumably then the observed changes must be assumed to be in part reflective of true changes.

The major shift that Curti (1967) notes is the shift from a view of the typical consumer as a rational, self interested individual to a view of consumers as inherently irrational, fickle, malleable, emotional, even though still egocentric. While both of these views have coexisted throughout the twentieth century, and still do, the rational view was dominant in the trade press at the turn of the century and shortly thereafter. This was not the result of naivete of professionals, for the academic psychology of the era also emphasized "reason" and "will" over emotion or feelings. This rational view argued for no nonsense copy styles, suitable for the "hardheaded" reader whose time was a scarce commodity. Self interest of these consumers was seen as including the immediate family, but the presumption then (as now) was that the consumer was able and adept at a careful calculus of costs and benefits and was unswayed by emotions, symbols, puffery, flattery, impulse, etc.

In contrast the irrational view, which came into full dominance by 1930, assumed that consumers were basically emotional and often fools. Immersed in their feelings of hopes and sorrows, basically vain, prejudiced, eager for compliments and flattery, these consumers were malleable and susceptible to suggestion, conditioned by repetition of pleasant stimuli, appealed to easily by sentimentality and sensationalism and that all of this was of far more importance in determining purchase behavior than consideration of product utility. Basic fears and drives such as social shame, competition, seeking of approval and social status were commonly recognized in the advertising trade long before social science academics "discovered" other-directed personalities in modern society. This dim view of consumers is a long tradition as shown by the

Printer's Ink (1891) editorial observation and admonition to "write to impress fools. Don't prepare (ads) for ministers and college professors, but for ignoramuses, and you will just as likely catch college professors." By the post war period the prevailing view was that, however rational consumer decisions might seem, or be portrayed by academics or consumers themselves, consumer choices were actually deeply influenced by emotional forces conscious, subconscious and unconscious.

Logic for Living

Marchand's (1985) research and reporting, undertaken with the goals of interpreting the contribution of advertising to "the vocabulary and syntax of American common discourse," studied some 180,000 ads from major periodicals for persistent patterns. Drawing heavily on the trade press and agency archives as well, he amasses an impressive and eclectic array of information about the backgrounds, constraints and biases of the advertising practitioners. The study focuses on the 1920/30s, by when the advertising industry was relatively substantial and mature. Ads themselves were increasingly given over the portrayal of consumers and consumption situations, providing vignettes of life-style, priorities and a logic of living, a rhetoric of consumption. The boasting self-assurance of the 20s and the troubled self-doubts of the early 30s lead to a trade press filled with revealing gossip. In later years, a rising sophistication lead to ads of greater subtlety, more covert communication and a trade press that was coy in the face of competition, critics, government regulators and cynical consumers. Thus, this period is well chosen as an era to begin this social history.

After a thoughtful theoretical and methodological introduction is a portrait of ad agents and their function just prior to 1920, drawn largely from the trade press. Caught up in the exhilaration of change, agencies were functioning on an unprecedented scale and tempo. The expanded role for advertising before WWI is illustrated in extended discussion of Crisco's 3 million dollar campaign, the Sunkist effort and success at branding a commodity, the development of institutional advertising and the use of advertising as part of the war effort. The establishment of advertising as an integral element of corporate marketing strategy was at least symbolically completed by Henry Ford's reluctant capitulation to its use in launching the Model A in 1927, but throughout these days the advertising community was doing much to dispel the imagery of snake oil suckering inherited from P.T. Barnum and nefarious patent medicines of the 19th century.

The evolution toward a modern marketing orientation is demonstrated in increased attention to consumer benefits, rather than product attributes, and the shift in copy tone from salesman to confidant, a tactic of personalization of appeal (see also Pollay 1985). These are exemplified in three major case histories; the marketing of Fleischmann's yeast (as a vitamin source, and later as a laxative), the dramatic and influential success of Listerine (as an astringent, aftershave, dandruff cure, douche, etc. but most successfully as a cure for halitosis, and only later for colds and now dental plaque), and the launching of the totally new product concept of Kotex, a challenge to communicate in good taste.

In a manner consistent with, but supplemental to, Fox's *Mirror Makers*, (1984), Marchand turns to the people who created the advertising. Capturing the conflicting approaches to professional status (technical practical expertise vs. cultural leadership and uplift by means of high educational standards, public service and dignity of behavior), he finds this conflict permeating the trade debates about copy styles, media choice, and agency selection. But transcending this conflict, the industry increasingly presented itself as an ambassador of the consumer population and their interests. The character

of the personnel serving in this role is displayed in the results of a study of the backgrounds, occupational attitudes, social and institutional ties of persons employed by the twenty largest agencies. This discloses a largely male culture, with good discussion of the small but sometimes influential roles of women and (less often) ethnic minorities. The tendency toward an urban inbreeding was countered with recruitment of staff from far and wide in hopes of staying sympathetic to the great mass of common everyday "just folks," although this intent was largely unfulfilled as staff of major agencies inevitably became urban elites with life styles quite different from the hoi polloi.

The agency as an organizational subculture is wonderfully described, giving rich life to the conflicts inherent in being courtiers to the clients, being judged by improper standards, emasculated by revisions, given no credit for accomplishment and victimized by tension and insecurities. While no one personality type dominated, the circumstances bred competition and cynicism as well as craftsmanship and soon became a young man's profession. Senior veterans complained of the ephemeral insubstantial nature of the work and a surprisingly large number suffered breakdowns from being habitually "perched on the edge of anxiety." Using backstage tales and trade talk, Marchand shows how this stress was handled by learning techniques for psyching one's self up to a state of delirious enthusiasm, by tension reducing self parodies, and by rationalizations for various "benign deceptions," those little white lies.

Practitioners viewed their audience from a "we-they" framework, not unreasonably since the dominant conception was a lowest common denominator of an "emotional, feminized mass, characterized by mental lethargy, bad taste, and ignorance" (p. 69). Given the successes of tabloids, funnies, matinee movies, and confession magazines, and the success of ads which imitated these in their art direction, this ignoble view is understandable, especially given the very limited role played by research. Another view, most vividly portrayed in media representations, was a more self-serving idealization of an affluent class audience, more cultured and cosmopolitan.

Throughout this period the industry drifted toward an abandonment of the great genteel hope of advertising as cultural uplift. This drift, accentuated by the depression, is manifest in changing industry norms and practices in art and copy styles, use of more intrusive media, use of bold competitive campaigns, scare tactics, editorial camouflage, etc. An extended discussion of radio demonstrates the evolution from a reluctance to intrude into domestic sanctity through a variety of increasingly noisy and obvious techniques. The funnies format, seen by many spokesmen as the nadir of utter mindlessness and low taste, was accepted as a necessary evil, fearing that consumers would not accept serious advice without a "dream world of frivolity and fantasy".

But art direction and style involved far more than just imitating other popular media forms. Art was seen as critical for its abilities to speak a language of emotion to less literate populations, to finesse the counter-arguing that words invite, and to convey dense images rich in meaning. As happened again in the 1950s, advertising embraced diverse styles of modern art forms, ultimately to retreat to sentimental realism, but photographic styles were dramatically altered in this period. Use of color and styling played an important role in the general merchandising strategy, and not just the formatting of ads. Product lines were extended into multiple colors and the concept of integrated aesthetic ensembles were promoted in an amazing diversity of products; the obvious fashion items, of course, but also appliances, utensils, room decor and even cameras, plumbing fixtures, and cellar boilers. This challenged traditional values of permanence and practicality, values held by the industry as well as the population, values whose reappraisal was obvious in

coined phrases like "progressive obsolescence" and "creative waste".

All of the preceding material is very well researched and convincingly presented, but to my mind the remainder of the book is Marchand's strongest contribution, his analysis of advertisements as "social tableaux." These are seen not as mirrors of reality so much as of aspirations, ideology and the presumptions and biases of the ad writers through whose minds the images have been refracted. Examining both the context of activities and the roles of the multiple people portrayed, sensitively interpreting both text and visuals, the next chapters discuss the social roles of family members, the "great parables" and the visual cliches and then how these parables and cliches were revised during the depression.

Ads gave more veneration to the "smart set, in the know" than is now common. Other minorities, like ethnics or the elderly, appear infrequently and usually in pronounced stereotypes. The greatest amount of display and information is on the family unit, with men and children narrowly cast as the businessman (not working man) and as the hope of the future respectively. Women's roles were far more variegated, but still domestic in focus. The range of behaviors modeled was from decorative object, to club woman, to fussy parent, to the quite common metaphor of wife as domestic executive purchasing agent. All of this is still seen and studied in more contemporary materials.

Not yet well demonstrated in contemporary studies is the analysis of common meta-themes, the great parables presented repeatedly by advertising to form a secular logic for living. The most prevalent are the following parables:

- "the first impression," tragedies of manners that projected a persistent critical judgment by myriad others;
- "democracy of goods", and its negative counterpart the "democracy of afflictions" which conveyed similarities of consumption styles and opportunities between classes quite different in wealth and political power;
- "civilization redeemed", that would restore the vim and vigor that Nature intended, counteracting either decadence or the stresses of high strung modern situations;
- "the captivated child", a reflection of popular theories that companionship and sweetened temptations were family management tools superior to coercion and discipline.

These parables, especially first impressions and the captivated child, were certainly metaphoric truths for the ad industry and must therefore be seen at least in part as projections from their job experiences.

The visual cliches, the iconographic representations are manifest in the display of poignant moments, entranced and worshipful gazing, heroic proportionings, enshrinement of objects in radiant beams, distorted perceptual angles and various other art techniques. The common cliches were:

- "Executive dominion," viewed through expansive windows overlooking miniaturized scenes;
- "family circles", where harmony and nostalgia occur in soft focus;
- "heavenly future" urban landscapes, of radiant alabaster cities;
- "pristine bucolic villages," whose solitary steeples symbolize a social harmony with spiritual depth.

"Advertising in Overalls" covers the modifications of these parables, visual cliches and ad style more generally, during the depression. This is interwoven with information about the early ineffective attempts to use advertising to counteract the psychological impact of the

crash and the emergence of new agencies with an associated shift in style in both copy and layout. Except for trace remnants, the elite effete styles seen in the 1920s give ground to hardboiled, shirtsleeve copy styles of "buckeye simplicity." Art shows strained determination in clenched fists and faces and layouts become bolder, colder, cluttered and literally blacker, dense with ink. But style changed more than substance as copy premises were familiar. The advertising parables were slightly revised, primarily increasing their severity. The importance of captivating children to eat and study well, for example, was made vivid with threats of skinniness leading to social mortification and the "unraised hand" predicating future failure. All of this was underscored with a "failed fathers" subtheme. The trade press discloses self-flagellation, pep talks, heroic portrayals of men fighting with their backs to the wall, and inspirational messages of mutual reassurance, holding out images of hope for themselves as well as their economic community.

The last chapter, the "therapeutics of advertising," recapitulates and synthesizes the main themes with fresh examples, citations and arguments. Assessing probable effects, as distinct from the industry's claims of importance, Marchand examines how advertising exposes audiences not just to product attributes but also to standards of taste, social correctness and potential psychological satisfactions; a schooling of sorts that provides a language, both visual and verbal, that aids the assimilation into a modern culture of high technology, complex economic and social relationships, and urbane sophistications. The integrating themes are urbanity, complexity and the problem of scale; proliferating choices and the vacuum of advice; and the re-personalization of American life.

Attitudes Toward Objects

Another historical study demonstrates how a semiological content analysis of advertisements can be informative about the relationship people have to the objects advertised. This helps us understand the materialism on our culture by tracing the evolution of attitudes and affect presumed and displayed in the ads. Leiss et al. (1986) write about advertising from a communications orientation, greatly enriched by its historical perspective. An eclectic analysis theoretically, their study also draws heavily on anthropological concepts. In summarizing their work, they note four eras during the twentieth century, within which there are different cultural frames for goods. This periodization, like all such historical periodizations, is a simplism that defines what is distinctive or emergent in each era while generalizing over many exceptions and cases which echo previous forms or presage forms to become more common at later dates.

They observe that advertising tactics evolved during the twentieth century through four identified phases, spanning roughly two decades for each phase. While this is not totally consistent with more detailed analysis of changing tactics (Pollay 1985), the trends identified are unmistakable. Ads were at first informative, descriptive of product attributes and the inherent utilities. In the 20s and 30s ads became more symbolic, with portrayals of prototypical elites shown with the products as props to a successful life. After the second world war, ads became more personalized, promising consumer gratifications in an intimate manner of a confidant. More recently, life-style advertising displays people and places, but also an attitude through techniques of film editing and use of sound tracks. These four periods are identified as displaying a cultural attitude toward goods as: idolatry, iconology, narcissism and totemism.

Since these terms are unfamiliar to most consumer researchers, some elaboration is in order. Idolatry is the chosen typification of the period 1890-1925 because the great bulk of ads in this era were messages which convey a tone of veneration of products. This was reflective, perhaps, of the awe induced by the abundances of rapidly expanding productive capacities in the land. The

sales strategy was direct and "rational", describing the products and their qualities, linking these to common sense advantages such as saving time, money or energy. The texts are often dispassionate and elaborately reasoned, presumptive of audience intensity of interest and willingness to read great quantities of advertising copy. Manufacturers displayed abundant pride in their lavish descriptions and art work used a number of cliched portrayals of putting products on pedestals, in halos, or in frames that elevate the product and its apparent stature. Ad copy turns around theses of status, family, social authority and a kind of "white magic" wherein the products seem to capture or control some potent but vaguely specified forces of nature.

Iconology typifies the period from 1925-1945, they argue, as the symbolic properties of the product come to dominate the utilitarian properties in the advertising. Presentations no longer focused on the manifest properties or appearances of the good, or on allegations about the personal needs. The earlier denotative discourse become subordinated to a more expansive connotative discourse "rooted in suggestion, metaphor, analogy and inference (Leiss, 1986, p. 284)." The focal point shifts from the object to the person as intended user, but only part way. The goods are still icons with captured qualities, such as cars symbolizing modernity, soaps symbolic of family integrity, shoes signifying sobriety or status. Similarly, the art work used exemplars of reigning social values, not typical consumers, showing a "class, not mass" appeal. The ads themselves display a system of meanings far more than they evoke or represent feelings. These were not a psychologically sophisticated set of productions, effective because they induce affect. Instead, products and person displayed seem frozen in time and space and reader involvement and identification is relatively passive.

With the narcissism phase, 1945-1965, the focal point moved closer to the person/viewer and brings emotion more clearly into view. The discourse displays greater psychological depth, and in its portrayals of the innermost regions of the psyche, the meaning of products were presumably more likely to resonate for the reader and to become internalized. Consumers were encouraged to consider in more intimate direct terms what the products would do for them personally and selfishly. Ads offered products as parts of a total personality, and the art style showed faces gazing directly at the reader to create identification. It's interesting to note that this advertising format predates the cultural attention to the "me generation" identified in the 1970s. The themes of narcissistic advertising were self transformation toward glamour, romance, sensuality and the "black magic" of being able to control the perceptions and attitudes of others towards ones self.

Totemism is the last phase they identify. This term is chosen because totemic objects constitute a code of social meanings, providing for the "signification and valuation of personas, occasions, functions and situations. (ibid., p. 295)." In this period, features of previous forms of advertising are recalled and synthesized, such that utility, symbolism and narcissism are aggregated under products as signifiers. Consumption is meant to be a spectacle, a public enterprise, with the products and serving as emblems and badges for social collectives, what Boorstin (1973) identified as consumption communities, or what we more commonly see as lifestyle groups. At times the brands or trade marks are totally abstracted from the products and literally worn as badges of identification by consumer citizens. Today's products serve as sources of identity, with clan membership purchasable in the democratic marketplace so that anyone who chose can wear the props of "a macho man" or "a yuppie" or the many highly fragmented groups such as joggers, bicycle racers, windsurfers, etc. All that's required is buying the correct gear, whose meaning is conveyed through its advertising and use of symbols. Consistent with this group related consumption pattern,

the ads emphasize friendships, groups and leisure social activities, with the emphasis on an activity.

Discussion

These three studies demonstrate some of the variety of approaches possible in historical studies and the various inferences that can be made. The analysis of trade concepts of human nature shed light on the intellectual history of the field of consumer behavior, the growing realization among advertisers of their capacity to influence consumers choices and perhaps, the changing nature of the average citizen in the increasingly consumption focused society. The analysis of advertising for a particular era to identify the meta-themes in common usage specifies that parables for living that advertising was promoting among the population, and a series of such studies would be a wonderful history of modern culture. The analysis of themes and tactics of advertisements over a long time span permits the identification of macro trends, such as the slowly changing relationship of consumers and the goods that they own and use. These changes impact what kinds of goods are sought, what criteria of employed in choices and how these goods are utilized -- in short everything that effects their meaningfulness.

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THE HOUSEHOLD AS A CONSUMING UNIT

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Abstract

This paper offers a few brief comments on the three papers presented in the session titled "The Household as a Consuming Unit."

Overview

The increasing diversity of scholarly work within the field of household consumption is evidenced in the three papers presented in this session. All three papers make contributions that may spur researchers (including the authors of these papers) in household consumption on to bigger and better things.

Heisley and Holmes

Heisley and Holmes (1987) do a nice job of reviewing a number of theoretical/research approaches to the household that have been or should be (they argue) used by consumer behavior researchers. Following an analysis of all articles published in the Journal of Consumer Research concerning the family, Heisley and Holmes conclude that sociological approaches (particularly the Interactionist approach) dominate this literature. Heisley and Holmes also argue that a number of underutilized anthropological approaches have great potential in the study of household consumer behavior.

There is little to argue with in the main thrust of the paper: almost without a doubt anthropological approaches are underrepresented in the consumer behavior literature. Only time will tell if anthropological approaches become more commonly used and, if so, whether their contribution will be a major one. The fact that Heisley and Holmes developed this paper increases the chances of these events coming to pass. In the meantime, there are a few minor points in the paper to be addressed.

Part of one of Heisley and Holmes' stated conclusions is that the Interactionist approach is the most purely sociological one. Technically, this is an opinion, not a conclusion based on their analysis. Those trained in Interactionism would certainly be glad to read this assessment of their approach. However, there are numerous schools of thought within sociology vying for the title of "most purely sociological."

On another matter, it is almost certainly the case, as Heisley and Holmes seem to imply, that articles in the Journal of Consumer Research are the best single indicator of the state of consumer behavior research in general. Perhaps the paper would be strengthened if a greater breadth of family consumer behavior-related articles were tapped. For example, articles in Advances in Consumer Research, the Journal of Consumer Affairs, and even the occasional article in Journal of Marriage and the Family might fruitfully be analyzed.

One final suggestion: A greater emphasis on strengthening family consumer behavior research through the use of historical and feminist approaches might be appropriate. The consumer behavior field suffers from a marked ahistorical bias. Almost everything we know about consumer behavior has been learned during (and quite possibly applies only to) the last 25 years. Similarly, the consumer behavior field has a marketing, and thus, a masculine bias. Feminist approaches are clearly needed to complete our understanding of family consumer behavior.

Foxman and Burns

Foxman and Burns (1987) contribute to the relatively new literature on role load within households. Until their work, researchers in this area had measured only wife role load. In addition to wife role load, Foxman and Burns add a measure of husband role load. There are numerous advantages to gathering data on both husband and wife role load, especially if these data are gathered from both husbands and wives.

Unfortunately, but undoubtedly for many good pragmatic reasons, Foxman and Burns gathered their data on wife and husband role load only from wives. Foxman and Burns recognize that such a procedure is subject to criticism. Indeed, it may be even more problematic than they seem to realize. Role load, especially in an era of increased labor force participation among wives, is probably a sensitive, emotion-laden issue in many households. Witness the recently coined term "superwoman" and all that it connotes.

Add to this the apparent tendency of persons to perceive their own workloads and role loads to be heavier than those of persons around them, and the data in Foxman and Burns' Table 3 may be reinterpreted. Table 3 clearly shows that the respondents in the study (wives) report that they (wives) are overloaded to a greater extent than are husbands. This finding may be largely a function of the fact that wives are the respondents. This would make an interesting future research project.

Foxman and Burns are to be congratulated for attempting to develop some propositions to guide future research. Such a procedure is essential if this area of study is to continue to be a fruitful one. There is room to quibble with their set of propositions. For example, it may be that the proposition that the underloaded partner will take on consumption activities could just as readily be reversed. This might especially be the case since consumer activities are already embedded in the role activities of both husbands and wives.

The paper mentions nothing about scale validation. If Reilly's scale has not yet been validated, work toward that end should receive a high priority.

Future researchers of family role load might also wish to consider whether or not it might be more productive to measure role behaviors rather than role perceptions, as this study did. It is plausible to expect some systematic inconsistencies between the amount of role load that persons perceive and the amount (by some "objective," perhaps observational, standard) they actually experience/perform.

Finally, it may be important (for policy reasons, at least) to distinguish between role overload resulting from multiple role demands (e.g., parent, spouse, employee) and role overload resulting from high demand emanating from just one role. We might distinguish tentatively between these two by calling the former true "role load" and the latter "workload."

Mayo and Qualls

Mayo and Qualls (1987) present the first longitudinal study of household durable goods acquisition. As such, their study represents a real methodological step forward. Dynamic, cross-temporal studies may go a long way in helping us understand what are, in fact, dynamic, cross-temporal processes. The data in this study are subjected to analysis techniques (latent structure analysis and partial least squares) that are sophisticated and certainly not widely known.

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The major problem with the paper seems to be that the importance of the findings may not match the apparent rigor and sophistication of the analysis. Was it resource effective to perform this rather complicated analysis simply to learn that consumers are not likely to purchase durables they already own, and that consumers become increasingly likely to purchase those durables that they have previously said they are likely to purchase? Granted that the latter finding may have marketing research implications, overall these findings are of little interest, especially when measured against the effort required to develop them. It should be noted that this criticism, to some extent, smacks of "blaming the victim," since researchers often do not know going in what their findings will be.

The product categories used also are problematic. For example, on what basis is a second car categorized as "luxury entertainment?" Clearly for many (most?) of the households in this study, a second car is more or less a necessity, i.e., part of "primary transportation." Similarly, on what basis is a freezer categorized as "luxury comfort?" For many (most?) of these households, a freezer is surely considered a highly utilitarian durable, i.e., part of a "basic household."

Continued longitudinal work on household consumption processes is to be encouraged. Such research and analysis almost certainly will uncover intriguing and exciting findings in the future.

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A REVIEW OF FAMILY CONSUMPTION RESEARCH:
THE NEED FOR A MORE ANTHROPOLOGICAL PERSPECTIVE

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Abstract

Six approaches to studies of the family that are relevant to research in consumer behavior are presented: the Interactionist, Social Anthropological/ Systems, French Structuralist, Developmental, Historical, and Feminist approaches. By organizing a sample of family consumption behavior literature drawn from the Journal of Consumer Research, this paper demonstrates that only a few of the relevant approaches have been utilized. Furthermore, there is a strong bias in the consumption literature towards utilizing sociological perspectives on the family while ignoring anthropological approaches. It is suggested that anthropological perspectives re the family can provide a major impetus toward broadening understanding of family consumption behavior.

Introduction

The family is both a major consumption unit in its own right and a partial determinant of individual consumption behavior. As such, it is a significant unit of analysis for consumer behavior researchers. In recent decades research on the family has grown tremendously and many new and radically different perspectives have emerged. Yet the field of consumer research in marketing has overlooked a number of these approaches to the family.

The goal of this paper is to stimulate consumer researchers' interest and creativity in relation to family studies. Therefore, six approaches that are currently utilized in studies of the family and that are relevant to consumer behavior research are discussed: the Interactionist, Social Anthropological/ Systems, French Structuralist, Developmental, Historical, and Feminist approaches. The basic tenets of each approach are outlined.

The major thesis of this paper is that only a few of the possible approaches to studying family consumption behavior have been tapped by consumer behavior researchers. Additionally, the perspectives used by consumer behavior researchers are typically sociological, not anthropological. In order to illustrate these observations, in this paper a sample of consumer behavior literature has been assessed in light of the frameworks used or not used.

The literature sample consists of all Journal of Consumer Research articles concerning the family that were published in the past twelve years. These articles are organized according to the type of approach employed by the researcher. As a result, it is concluded that:

- (1) the Interactionist approach is the most purely sociological approach and is by far the most utilized in family consumption behavior research,
- (2) anthropological perspectives such as Social Anthropological/ Systems, and French Structuralist approaches to the study of the family are not used in the sample, and
- (3) researchers utilizing the interdisciplinary Developmental, Historical, and Feminist approaches to the family tend to ignore the anthropological perspective on these approaches; furthermore, these approaches are employed in only a handful of the studies in this sample of consumption literature.

In sum, if the Journal of Consumer Research is a good indicator of the field of consumer research in general, then anthropological perspectives on the study of the family have been practically if not virtually ignored.

Interactionist Approach: A Well-used Sociological Approach

The Interactionist approach is a sociological and social psychological approach in which the family is conceived of as a unity of interacting personalities. Interpersonal relations and communicative processes within the family are studied as indicators of familial role relations, status positions, and norms (role expectations). Decision making and socialization within the family are two core processes of concern within the Interactionist framework (Schvaneveldt 1966).

One of the more common uses of the Interactionist approach is in analyses of family decision making processes. Family decision making research constitutes the majority of the articles on the family in the Journal of Consumer Research. There are nineteen articles on family decision making published in the past twelve year period in the Journal of Consumer Research. With some overlap the family decision making literature can be classified into those articles dealing with roles in the family decision making process (Davis 1976, Davis and Rigaux 1974, Ferber and Lee 1974, Filiatrault and Ritchie 1980, Green et al 1983, Scanzoni 1977, Rosen and Granbois 1983), and those dealing with such power and conflict concepts as dominance, influence, power, conflict, and consensus in family decision making (Filiatrault and Ritchie 1980, Green et al 1983, Munsinger, Weber, and Hansen 1975, Park 1982, Spiro 1983, Szybillo, Sosanie, and Tenenbein 1979).

Another area of Interactionist studies that is relevant to consumer behavior research concerns the effects of family interaction on the consumer socialization of children. This has been examined by Churchill and Moschis (1979), Moschis (1985), and Moschis and Moore (1979). Belk, Bahn, and Mayer (1982) also examine how sibling influence affects developmental recognition of consumption symbolism. These applications of the approach are socio-psychological in nature.

Three less used interactionist approaches to the study of family decision making are an information acquisition and processing approach, an economic approach, and an individual and joint preference approach. One article uses an information processing approach to examine how different husband-wife information processing strategies affect joint decisions (Curry and Menasco, 1979). Rudd and Kohout (1983) examine family members' acquisition of information and decision time using an interactionist approach. The economic approach is used to explore the possibility of increasing satisfaction with family decision making by introducing economic reasoning into the process (Kourilsky and Murray 1981), and to look at fertility and resource allocation decisions (Bagozzi and Van Loo 1978, Hunt and Kiker 1981). Finally, Granbois and Summers (1975), Krishnamurthi (1983), and Wind (1976) focus on how individual (own and relevant others') preferences affect joint preferences and decisions, and on how relevant others' preferences affect individual preferences and decisions.

Another Interactionist approach that could be used in family decision making research is the game theory approach. While game theory has been developed in other areas of marketing research, especially competitive modeling, it has not been applied to the family by consumer behavior researchers.

The Interactionist approach can be credited for producing the first dynamic model of the family, since it views the family as a negotiating process instead of a static structure. On the other hand, the approach makes it difficult to generalize findings across families because emphasis is upon individual family dynamics. Interactionists typically overlook macro issues, such as the family's relation to economy, polity, etc., and hence tend to ignore the historical, cultural, and social context of the family's dynamics. Anthropological perspectives such as the Social Anthropological/ Systems approach or the French Structuralist approach explicitly deal with such macro considerations.

Anthropological Perspectives: Not Used

Social Anthropology/Systems

Social Anthropologists examine the family in terms of the structure of kinship relations and their functions in the culture (Keesing 1975). Classic social anthropologists focus upon "the formal aspects of the systems of marriage and the family, such as composition, residence rules, kinship obligations, parental authority patterns, marriage forms and regulations, separations, and so on, and attempt to trace the structural implications of these aspects for the community as a whole" (Berardo 1966, p. 19). Kinship diagrams, a tool for tracing formal kinship structures, are an integral part of classic Social Anthropology. In the past two decades social anthropological studies of kinship have moved away from kinship as a rigid formal structure by incorporating the notion of the family as a flexible, dynamic system and emphasizing the flow of goods and exchange along kinship lines. This latter approach has become known as the Systems approach.

The most important contribution of the Systems approach to the study of the family is its emphasis on individual families as semi-bounded dynamic entities with distinct cultural configurations and relations. In contrast to Interactionist theorists who examine generalized internal workings of families, Systems theorists focus on the particular and unique relations among kin, taking each person's interaction with the greater social environment into account. A description of this system is known as the "family network." Systems studies examine the direct and indirect communicative processes throughout a network.

The Social Anthropological/ Systems approaches to studies of the family emphasize that the important unit of study for consumption research is not the individual nuclear family. Instead, a broader realm of influence is acknowledged. For example, Foster's (1984) analysis of Thai social exchange networks demonstrates the great amount of exchange of goods and aid among seemingly unrelated households. Consumption studies that examine the nuclear family as an independent consumption unit, that consider the resource base of a household in isolation, or that only take into account goods that have been decided on or purchased by members of that household, are missing the contributions made by other members of the network.

Not only do Social Anthropological/ Systems researchers emphasize the greater resource base of the extended network but they have also demonstrated the influence that this network has upon family decision making. Bott (1957) posits a relationship between decision making, role behavior, and the connectedness of the kin and social networks. The strength of this relationship and its impact on consumption decisions should be pursued by consumer behavior researchers. Perhaps familial connectedness is a major construct influencing consumption behavior. At the 1985 ACR conference O'Conner, Sullivan and Pogorzelski, in a literature review of cross-cultural family purchasing decision articles (most of these being written in fields outside of consumer behavior per se) recognize that the connectedness of the family network influences joint decision making within the family. However this concept has not been used in the consumer behavior research, either in the family decision making literature or otherwise.

Several articles in the JCR sample deal with cross-cultural consumption differences of families or households (Douglas 1976, Green, et al 1983, Wallendorf and Reilly 1983). However, no articles are found that examine differences in kinship relations and corresponding consumption behavior differences, a notion that seems central to an understanding of family consumption behavior.

French Structuralism

French Structuralism is an anthropological approach that was inspired primarily from the work of Claude Levi-Strauss (1969). French Structuralist studies of the family emphasize the symbolic meaning of kin and kin terms and seek to explain ideals and norms concerning appropriate familial behavior. Emphasis is not upon measuring actual familial behavior under varying social conditions but upon the underlying cultural symbols, beliefs, and ideals that structure the choices of social actors. Of particular relevance to consumption research are French Structuralist discussions of how cultural ideals structure gift-giving and other exchange behavior within the family.

In the growing consumer behavior literature on symbolism, ritual, and gift-giving, the influence of French Structuralism is often apparent. Expressions of French Structuralism in consumer behavior and examples of its use in relation to family consumption are found in Levy (1981) and Douglas and Isherwood (1979). Levy assumes "that the products are used symbolically, and that the telling about their uses is a way of symbolizing the life and nature of the family" (1981, p. 50).

French Structuralism, however, has not been applied to family consumption research in the Journal of Consumer Research. Hirschman's (1985) JCR article does advocate using the French Structuralist approach in family consumption studies by suggesting that the "impact of ancestry and kinship upon consumption and the spiritual meaning with which they can invigorate our possessions are important avenues for consumer research" (1985, p. 151).

The potential contribution of French Structuralism to consumer behavior studies of the family lies in the concept of "family" as a symbol bearing cultural meaning. The symbolic value of the consumption pattern of the family, and ideals and beliefs concerning appropriate interfamily behavior are two areas of French Structuralism that may serve to explain variations in family consumption patterns given similar life circumstances.

Interdisciplinary Approaches: Anthropological Perspective Not Applied

Developmental Approach

The major emphasis of the Developmental approach is upon the family life cycle. There are two versions of the developmental approach: 1) the socio-psychological development of the family life cycle that was first proposed by Duvall (1957), and 2) the anthropological structural-functional view of the household developmental cycle as delineated by Fortes (1958). The first version is closely related to the Interactionist approach. Focus is upon roles, position, and status within the family over the life cycle (Hill and Hansen 1960). Socio-psychological Developmentalists emphasize individual family dynamics over time and, like interactionists, tend to ignore the historical, cultural, and social context of the family's dynamics.

The second version of the Developmental approach examines changes in household family structure over the family life cycle as individuals age, get married, have children, etc. Fortes (1958) delineated three stages in what he refers to as the household developmental cycle: expansion, dispersion or fission, and replacement. Much of the subsequent work in this area has concentrated on delineating household or other structural changes over the life cycle.

The added factor of treating the family as dynamic over time in certain generalizable ways makes the Developmental approach valuable. On the other hand, the time dimension is of a relatively short term nature. That is, family after family repeats this cycle. The approach does not address long run historical changes that differentially affect families across generations.

In the Journal of Consumer Research, for the past twelve years, one finds articles using family life cycle for segmentation purposes, as a theoretical construct (Derrick and Lehfeld 1980, Murphy and Staples 1979, Wagner and Hanna 1983), or as a control variable when investigating women's time allocation and consumption patterns when they work outside the home [See discussion of Women in the Work Force, below]. As is evident from these studies, family life cycle has been used mostly as a demographic and socio-psychological variable in studies of the family. For example, Spiro (1983), who controls for family life cycle when examining husband-wife influence strategies in family decision making, and a few of the "Women in the Work Force" researchers, view the family life cycle from the interactionist, socio-psychological perspective.

An anthropological-structural perspective of the relationship between household developmental structure and family or household consumption behavior could offer major contributions to the field. For example, extended family households and nuclear family households certainly differ in their consumption patterns and priorities. A theory that explicates such structural developmental differences in consumption patterns and the causal factors underlying them could better explain the relationship between family life cycle and consumption patterns.

Historical Approach

In recent decades, historians have developed an approach to the study of families that is unique to their discipline. Like the Developmental model, the Historical approach examines change in the family, and as such it also deals with the family life cycle. However, the Historical approach more typically examines long term changes in household structure and how these relate to changes in other sectors of the society (Anderson 1980). What delineates the Historical approach is this focus on long term change, and the use of archival sources to examine this change. The Historical approach is now used by some sociologists and anthropologists in their study of the family, and its diachronic perspective is a certain improvement over synchronic cross-cultural comparisons as evidence of change.

One traditional approach in historical analysis has been the sociological demographic approach - one of correlational analyses of changes in household demographics with changes in economy, ecology, polity, and social accident (Anderson 1980). There is only one article in the JCR sample that even approximates the diachronic, demographic approach to studies of the household. This article analyzes change in American "Patterns of Marriage and Family Formation and Dissolution" (Kerckhoff 1976) with the conclusion that there is little evidence of radical change. For a better understanding of consumption behavior, an analysis is needed of how household and family structure has changed historically in relation to changes in the larger social environment, and how these changes relate to changes in consumption patterns.

Because historians have typically relied upon data of household/ residence and composition rather than of kinship analyses, which are difficult to undertake with archival material, they have drawn attention in recent years to the distinction between household and family. Yanagisako, (1979) and Netting, Wilk, and Arnould (1984) suggest that the domestic group has two dimensions. One dimension, based on kinship relations, is the family. The second dimension is the household, which is defined by at least some degree of co-residence and a shared set of activities.

There has been little sensitivity to the issue of family versus household in the marketing literature. Only one article (Ferber and Birnbaum 1977) in the sample dealt with this difference by objecting to economists' tendency to propose a single preference function for the household based on the male head of household's preference function.

The implications of family relations as distinct from the household unit, in addition to the implications of co-residence and shared tasks as distinct from family relations, and the interaction of these two factors, needs to be more carefully considered in consumption behavior research. Family relations often span a wide geographical area and tend to influence consumption ideologies, whereas households are confined to a geographical location and in addition to influencing ideologies, tend to influence consumption behavior on a more concrete and daily basis.

Feminist Approach

The Feminist approach to the family, as described in an excellent synthesis of the field by Thorne (1982), challenges a number of prevalent assumptions about the family. The approach particularly forces a critique of the Parsonian model of the family, which views the role of women as primarily responsible for expressive functions (home and family centered, child-rearing, domestic duties, etc.) and the role of men as primarily concerned with instrumental functions (especially as the bread-winner). Feminists note that this is an ethnocentric view of what the family should be, being based on white, middle-class, Western ideals. Feminists also charge that mainstream Western society treats most variations from the nuclear family model as deviant forms.

There have been seventeen articles published in JCR during the past twelve years that focus on women: all in the context of the family. Two studies implicitly focus on women, discussing the fertility decision and time allocation from an economic, interactionist, family decision-making perspective (Bagozzi and Van Loo 1978, Hunt and Kiker 1981). Scanzoni (1977) examines the effect of women's changing roles on family decision making - again an interactionist perspective. Venkatesh (1980) examines the relationship between women's identification with traditionalism versus feminism and certain life-style characteristics. The rest of the articles present analyses of the effect of women's labor force participation on their time allocation and/or consumption behavior with regards to the family (mostly examining the use of labor-saving devices and services in the home). Of these latter fifteen articles, only two deal with the issues from a feminist perspective.

The majority of the labor force participation literature addresses consumption and time allocation differences between married women who work outside the home and those who do not (referred to most often in the literature as working and non-working wives, a degrading comment on women who work in the home). In these articles, the tendency is to ignore differences in the types of work that are done by women, and present a simple "works versus does not" or "hours worked" analysis (Bellante and Foster 1984, Douglas 1976, Jackson, McDaniel and Rao 1985, Morgan 1985, Nickols and Fox 1983, Strober and Weinberg 1977 and 1980, Weinberg and Winer 1983). The research in this area has only recently progressed into more sensitive analyses of differences between women and their worktypes, as shown by Reilly (1982), who considers the degree of role overload experienced by women who work outside the home, and Schaninger and Allen (1981), who consider the women's occupational status. Yet all of these studies are basically aimed toward marketers' ability to use wives' occupational status as a segmentation variable, and are not concerned with any sort of a feminist perspective of women's consumption patterns.

Ferber and Birnbaum (1977, 1980) are the only researchers who use the Feminist approach in dealing with the allocation of time by women over the life cycle. Ferber and Birnbaum present wife's labor force participation over the

family life cycle as an important determinant of a woman's status within the family, her dependence on the family, the satisfaction of both spouses, and the family's economic well-being. These types of considerations, and the impact of these factors on women's consumption needs and behavior, should be a most interesting area for future family consumption research.

Most of the literature that focuses on women uses a sociological, interactionist perspective rather than an anthropological perspective. Because women's labor force participation, roles, and status differ across societies, research that examines the relationship between family consumption behavior and these factors cross-culturally is needed.

Conclusion

This paper has outlined six basic approaches to the study of family behavior and their applications to consumer behavior research. It has been found through an examination of articles published in the Journal of Consumer Research over the past twelve years that research into family consumption behavior has relied most extensively on sociological approaches to the family, while anthropological perspectives have been underutilized.

Consumer behavior researchers have tended to view the family and/or household from one of the following viewpoints: 1) the family as a consumption decision-making unit, especially with regard to major purchases, 2) the family life cycle as a framework for describing changing consumption patterns, 3) the household as a unit of analysis in various investigations of consumption patterns, without any distinction between family and household as consumption units per se. Correspondingly, the approaches that have been most used are sociological approaches, and particularly the Interactionist approach.

Social Anthropological/ Systems and French Structuralist approaches to the family are not found in the sample. These anthropological approaches, however, have significant potential for uncovering the relation between varying kinship structures and consumption patterns or the symbolic value of the consumption pattern of the family.

Finally, interdisciplinary Developmental, Historical, and Feminist approaches, have been significantly underrepresented. Researchers using these interdisciplinary approaches have tended to ignore the anthropological perspectives on changing household structure over time, differences between household and family, and cross-cultural variations in women's roles.

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ROLE LOAD IN THE HOUSEHOLD

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ABSTRACT

The authors expand Reilly's (1982) operationalization of role load by comparing both spouses simultaneously to identify cases where: (1) one spouse is overloaded and the other underloaded; (2) both are overloaded; and (3) both are underloaded. Empirical analyses determine the scales to be reliable after slight modification and independent for husbands and wives. Five different household role load configurations are identified and described. The paper concludes with propositions about the implications of spouses' role load situations on information acquisition, purchase decision-making, and assortment of goods and services found in the household.

INTRODUCTION

Over the past several years, researchers have investigated the phenomenon of working wives and its effects on household consumption. For the purpose of introduction, three streams of research can be identified. Each will be briefly described, and then the focal construct in this paper will be presented.

Numerous studies have documented demographic shifts which are customarily reported in percentages of working wives or hours worked over time. Bartos (1977, 1978), McCall (1977), and Robinson (1977) typify this category, and all have shown dramatic increases in the numbers of working wives. Zeithaml (1985) aptly describes the marketing implication of this trend. A separate question concerns the effects of working status on household purchase behavior, and researchers such as Douglas (1976), Reynolds, Crask, and Wells (1977), Strober and Weinberg (1977, 1980), and Shaninger and Allen (1981) have sought to determine relationships between wife's working status and convenience goods consumption. Finally, the last category of research addresses the impact of working status on husband and wife purchase decision making. An example is Davis (1974), who describes comparative resource theory as a determinant of influence distributions in household decision making. Empirical studies in this area are typified by Spiro (1983), Ferber and Lee (1974), and Munsinger, Weber, and Hansen (1975).

The last two categories of research have tended to yield findings of weak associations between work status and consumption or decision making. But significant progress has been made by Reilly (1982) who has revealed the operation of a variable, namely "role overload," which moderates work involvement and convenience goods consumption as well as time-saving durable goods ownership. Consequently, this paper adopts role load (i.e., a continuum of demands on a spouse's time, energy and other resources) as its focal construct. The purposes of the paper include presenting an expanded conceptualization of role load and reporting some empirical results which describe the measurement properties of a role load scale along with some individual household differences.

ROLE LOAD AS A MODERATOR FOR HOUSEHOLD CONSUMPTION

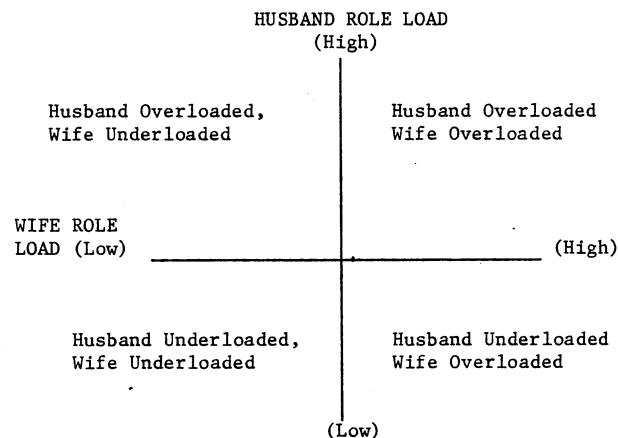
While Reilly (1982) restricted his attention to wife role load and found causal linkages to convenience items purchases and time-saving durables ownership, it is important to note that role load has been documented in males as well. For instance, early writings by McClelland (1961) or Kahn et. al. (1964) identified significant amounts of role load in male workers. Also, psychologists and sociologists such as Holahan and

Gilbert (1979) or Keith and Schafer (1980) have reported role load for husbands as well as wives. These studies illustrate the need for an expansion of Reilly's (1982) conceptualization of role load as it affects household consumption. A separate consideration calling for review of role load is pointed out by Reilly himself. He notes a major problem in his findings to be the small amount of variance explained by the constructs in his model and suggests that an important explanatory variable may have been omitted. This paper expands the conceptualization by including the role load situations of both decision makers in the household. (A previous paper, Burns and Foxman (1986), details the determinants and individual differences component of role load in the household.)

Figure 1 offers a simple diagram which simultaneously compares the role load of the wife to that of the husband. The midpoint corresponds to the same "average" amount of total role load perceived by husbands and wives. Four quadrants are apparent: (1) Both spouses underloaded; (2) Both spouses overloaded; (3) Husband role overloaded and wife underloaded; and (4) Wife role overloaded and husband underloaded. This comparison illustrates that heavy role portrayal pressures perceived by one spouse may be offset by light demands on the other. On the other hand, both spouses may experience heavy (or light) role demands. If role load is a determinant of household consumption, the simultaneous comparison of both spouses' role load situations would appear to be more appropriate than isolating attention on the wife alone.

FIGURE 1

SIMULTANEOUS COMPARISON OF HUSBAND AND WIFE ROLE LOADS



RESEARCH QUESTIONS

It is important to note that Reilly's (1982) study is the first to operationalize role load in household consumption, and the authors have seen little subsequent empirical study in this area. An exception is Joag, Gentry, and Hopper (1984) who used their own scale. In other words, the construct is still in the early stages of scale development and descriptive analysis. Consequently, for this study, the following research questions were pursued in sequence.

1. Can perceived role load be measured reliably for both spouses?

2. Is perceived role load independent for spouses in the household?
3. Do groups of husbands and wives exist at different role load configurations?
4. Can unique demographic or consumption factors be found for various role load configuration groups?

OTHER DEMOGRAPHIC FACTORS

Variable	Sample	Mean	St. Dev.
(Based on midpoints)			
Wife's Age	178	39.4 Yrs	12.3
Husband's Age	179	42.8 Yrs.	12.5
Wife Workweek (Hrs)	173	35.8 Hrs.	10.7
Husband Workweek "	174	40.6 Hrs.	11.3
Children under 6	179	0.4	0.8
Children 6 to 12	180	0.3	0.6
Children 12 to 18	178	0.3	0.6
Children over 18	176	0.1	0.5
Total Children	173	1.2	1.3
Family Income	175	\$48,600.0	18,230.6
Wife's Contribution	170	39.8	20.8

METHODS AND FINDINGS

Questionnaire and Sample

The study utilized a convenience sample of married women living in Baton Rouge, Louisiana. A self-administered questionnaire was designed as part of a larger study on household consumption. One section of the questionnaire included Reilly's thirteen Likert-scaled items (1982, Appendix A, p. 417) operationalizing wife role load while the identical thirteen items were modified with the subject, "my husband," to operationalize perceived husband role load. Other sections on the questionnaire related to demographics, consumption items, and purchase decision making.

Respondents were solicited with a two-stage approach. In the first stage, several different womens' groups presidents were set letters requesting them to distribute questionnaires at the next group meeting. The letters stated the local university was sponsoring the study and that anonymity was assured for each respondent. For those agreeing to do so, the appropriate number of questionnaires, with postage-paid return envelopes attached, was sent. A total of 180 useable questionnaires was included in the analyses described in this paper. Married women from at least six different groups participated in the study. Table 1 presents a demographic profile of the sample and reveals that the objective of gathering data from a fairly wide range of married women was attained. Nonetheless, the final sample was clearly educationally and financially up-scale.

TABLE 1

DEMOGRAPHIC PROFILE OF SAMPLE

EDUCATIONAL LEVELS				
CATEGORY	WIFE FREQUENCY	WIFE PERCENT	HUSBAND FREQUENCY	HUSBAND PERCENT
Refusal	3	.	1	.
Some H.S.	0	0.0	3	1.7
H.S. Graduate	23	12.8	15	8.3
Vo-Tech Degree	5	2.8	8	4.4
Some College	46	25.7	40	22.1
College Degree	31	17.3	41	22.7
Some Grad.	20	11.2	13	7.2
Masters Degree	38	21.2	21	11.6
Special Degree	5	2.8	6	3.3
Some Doctoral	7	3.9	5	2.8
Doctoral Degree	4	2.2	29	16.0

RACE CATEGORY		
CATEGORY	FREQUENCY	PERCENT
Refusal	1	.
White	161	89.0
Black	17	9.4
Other	3	1.7

(continued in next column)

Reliability and Independence of Perceived Role Load

The reliability of the husband and wife role load scales was assessed in the same way Reilly (1982) assessed the original. That is, item-to-total correlations were scrutinized and low items deleted. Reilly's lowest reported item-to-total correlation for retained items was .502; consequently, a cutoff of .50 was used. Table 2 lists the thirteen items and associated correlations for the final scale operationalizations. For both husband and wife role load, Item #8 ("Many times I/my husband have/has to cancel commitments.") was deleted. The table also reports that one additional item was deleted on each scale. Chronbach alpha coefficients for the final scales were determined to be .89 and .93 for wife and husband role load, respectively. Reilly reported a value of .88 in his scale.

TABLE 2

ITEM-TOTAL CORRELATIONS FOR ROLE LOAD SCALE ITEMS

Item	Item-Total Correlation	
	Wife Scale	Husband Scale
I have to do things which I don't have the time and energy for.	.62	.66
There are too many demands on my time.	.72	.85
I need more hours in the day to do all the things which are expected of me.	.73	.83
I can't ever seem to get caught up.	.68	.71
I don't ever seem to have any time for myself.	.63	.73
There are times when I cannot meet everyones' expectations.	.50	.68
Sometimes I feel as if there are not enough hours in the day.	.55	.70
Many times I have to cancel commitments.	*	*
I seem to have to overextend myself in order to be able to finish everything I have to do.	.68	.82

(continued on next page)

TABLE 2 (continued)

I seem to have more commitments to overcome than some other wives I know.	.53	.73
I find myself having to prepare priority lists to get done all the things I have to do. Otherwise, I forget because I have so much to do.	*	.56
I feel I have to do things hastily and maybe less carefully in order to get everything done.	.59	.61
I just can't find the energy in me to do all the things expected of me.	.58	*
<hr/>		
(Cronbach's Alpha for reduced scale)	.89	.93)

* Below .50 cutoff criterion; deleted from final scale.

For the test of statistical independence between the two scales, a Pearson product-moment correlation coefficient was computed for the summed item responses pertaining to each reduced scale. A value of .056 (nonsignificant) was found, indicating no systematic association between perceived wife role load and perceived husband role load within households.

Subgroup Analysis

The conceptualization of simultaneously compared husband and wife role load posits that the two dimensions are orthogonal. Further, it suggests that couples will be found in any of the four quadrants. The finding of essentially zero correlation between the two scales verified the independence of the dimensions and permitted the application of cluster analysis as a convenient means of identifying similar groupings of households.

Since cluster analysis is an imprecise technique, two precautions were taken to guard against spurious or artifact results. In the first one, the sample was split in half and two separate cluster analyses, using Ward's method, were performed to determine the number of clusters. In both cases, inspection of the plot of the number of clusters against the Cubic Clustering Criterion suggested a five cluster solution was appropriate. Thus, when this pattern was corroborated with the full sample, greater confidence was applied to the belief that five subgroups existed. The second safeguard necessitated a split-half discriminant analysis performed with the five cluster groups. With the odd-number questionnaire responses used to build the discriminant model coefficients, reclassification of the even-numbered holdout sample resulted 81 out of 88, or 92%, correct. Thus result further strengthened the belief that spurious results had been held to a minimum.

Table 3 contains descriptions of the five subgroup clusters found in this stage of the analysis. Analyses of variance incorporating Duncan's Multiple Range Test found significant differences between all five husband role load cluster means ($p < .10$). For wife role load, clusters 5 and 2 and clusters 2 and 4 failed to be significantly different.

TABLE 3

SUBGROUP MEANS, STANDARD DEVIATIONS AND DESCRIPTIONS

Cluster	Size	Wife Role		Husband Role		Description
		Load	Mean	Load	Mean	
# 1	56	39.5	(5.0)	40.2	(4.2)	Wife Average, Husband Overloaded
2	40	46.6	(3.4)	28.4	(4.7)	Wife Overloaded, Husband Underloaded
3	47	31.7	(6.0)	26.0	(4.4)	Wife Underloaded, Husband Underloaded
4	19	45.1	(7.0)	15.3	(3.4)	Wife Overloaded, Husband Underloaded
5	10	48.4	(2.8)	49.1	(1.8)	Wife Overloaded, Husband Overloaded
<hr/>						
Total Sample Analyzed	172	40.2	(7.8)	31.2	(9.9)	Wife Average, Husband Average

(Standard Deviations in Parentheses)

The specification of the midpoints on the perceived husband and wife role load dimensions was a bit problematic. Strictly using the 11, 5-point scale items, a range of 11 to 55 was possible, with a midpoint of 33 mathematically correct. However, inspection of the sample means revealed an average of 31.2 and 40.2, respectively. It was decided to use the sample averages to identify the midpoints to adjust for any response-scale biases which may have entered or natural differences (i.e., husbands may be less role loaded than wives in general) which may have influenced the responses. Comparisons of the cluster centroid values to these benchmarks allowed the descriptions provided in Table 3.

Demographic and Consumption Factors Unique to Subgroups

The final analyses were exploratory comparisons of selected demographic factors and one consumption-related variable across the clusters. Analyses of variance were performed using cluster grouping to inspect for significant differences in: (1) wife age, (2) husband age, (3) wife's workweek length, (4) husband's workweek length, (5) number of children in various age categories, (6) total family income, and (7) percent of family income contributed by the wife. In addition, Chi-square tests were performed on categorical variables of: (1) husband's education, (2) wife's education, and (3) race. Finally, a count of the number of time-saving durables and services found in the household was compared.

Because of the tentative nature and sparceness of these comparisons, tables are not offered. Instead, the general patterns of findings will be described. Significant differences were found only for husband age, number of children, husband workweek length, and percent of family income contributed by the wife.

Subgroups 4 and 5 demonstrated the most interesting profiles. In subgroup 4 (Husband Underloaded, Wife

Overloaded) husbands tended to be older (46 years) and worked fewer hours (30 per week), while wives contributed most to the family income (52 percent). In subgroup 5 (Husband Overloaded, Wife Overloaded), husbands were younger (38 years) and worked more hours (46 per week), while more preschool-aged children were present, and the wife contributed the least (32 percent) to the family income.

CONCLUSIONS AND PROPOSITIONS FOR FUTURE RESEARCH

Before continuing on, three limitations of this study must be mentioned. First, the results must be tempered against the convenience sample used. A conscientious effort was made to gather a broad cross-section of married women, and this objective was partially accomplished. Nonetheless, the results are generalizable only to households similar to the demographic profile presented in Table 1. Second, the use of the wife's perception of her husband's role load does raise questions of accuracy and may be criticized for this reason. Finally, the judgement necessary to use cluster analysis presents opportunity for error even though safeguards were present.

Balanced against these limitations, the results of this exploratory study suggest that perceptions of husband and wife role load can be measured; although, there is room for further measure purification. That role load is independent between spouses indicates that they either react differently to identical role demands (e.g. parent role) or they have different role demands (e.g. mother versus father). Most probably a mixture of the two exists. Finally, the exploratory results indicate that working status of the wife is not a sole determinant of role load as one might believe, for family demands appear to be equally important for certain households. In other words, conceptualization of role load requires a general resource framework for proper understanding.

The descriptive findings of this study permit speculation on the consequences of role load on household consumption decision-making and assortment of goods and services. For purposes of discussion, we will identify three categories of consequences where future research may be applied. These three categories are: (1) information acquisition by household members in the early stages of evaluation; (2) purchase decision making by household members in the latter stages of the process; and (3) the assortment of goods and services possessed by a household. Figure 2 summarizes our current propositions for various role load configurations. In these propositions, we assume that household members will work together toward resolution of purchase decisions, and that a role underloaded spouse will tend to take on more of the tasks involved when the other spouse overloaded. Similarly, if both are underloaded, the process will be more leisurely and jointly-executed than when both are overloaded.

In addition, our description adopts a family purchase decision-making framework advocated by Burns and Granbois (1980) and espoused by Gredal (1966) which requires looking at the process across three levels. In descending order of specificity, these are (1) budget allocation, (2) generic product choice, and (3) specific variant selection. Budget allocation refers to decisions which bind family resources over long time periods. Generic product choice pertains to selection of one product over another after budget allocation has been decided. Finally, specific variants are subdecisions such as brand, style, size, color, and so on. Our assumption is that the more role load perceived by a spouse, the less the tendency to participate in specific variant decisions.

FIGURE 2

SOME PROPOSITIONS FOR HOUSEHOLDS UNDER DIFFERENT ROLE LOAD CONFIGURATIONS

Husband-Wife Role Load	Information Acquisition	Purchase Decision-Making	Assortment Characteristics
One Overloaded; One Underloaded	Delegation to/ Assumption by, Underloaded Spouse	Joint decisions for Budget allocation; Variant decisions made by underloaded spouse	Skewed toward overloaded spouse; Preferences of underloaded spouse for variants
Both Underloaded	Extended Joint Search and Information acquisition	Extended joint decision-making	Least incidence of convenience items, time-saving durables; Joint preferences represented
Both Overloaded	Truncated and individual information acquisition	Minimal joint decision-making, especially for variants	Most incidence of convenience items, time-saving durables; Diffused preferences for variants

In our predictions, it has been necessary to assume that other determinants are constant. That is, expertise, income contribution differences, or other sources of decision-making involvement are not taken into consideration. Each category's predictions are now described in order.

Information Acquisition

When one spouse is overloaded and the other underloaded, it is likely that greater delegation and/or voluntary assumption of information-gathering activities will occur for the underloaded spouse. Thus, store visitation, interaction with sales personnel, reading of sales and advertising literature, and product trial are example of these tasks. The underloaded spouse would be expected to gather raw information, distill it, and communicate it back to the overloaded spouse. If both spouses are underloaded, the prediction is that greater joint information search, such as shopping trips, and greater discussion of information will take place. In other words, the most extended instances of information search and joint processing would be anticipated here. Finally, when both spouses are role overloaded, one would expect information acquisition to be relatively shorter, perhaps truncated, or highly abbreviated because of other time demands on the spouses.

Purchase Decision Making

This stage pertains to the level of decisions, influence distributions, and extensiveness of deliberations. For the household with one over- and one underloaded, it would be expected that the overloaded spouse would be more involved in budget allocation stages and less involved in product or variant selection decisions. Decision resolution for these would be delegated to or

assumed by the underloaded spouse. The decision process at this level would be most similar to individual decision-making since the role overloaded spouse would take a passive role. If both spouses were role underloaded, the decision-making process would be an extended joint process; that is, more alternatives would be considered; more criteria would be used; and greater time would be needed to discuss individual preferences. The greatest incidence of approximately equal decision-making influence distribution would be anticipated for these couples. Finally, if both spouses are role overloaded, a prediction of more autonomy and speedier resolution is appropriate. Also, it is probable that postponement of important purchase decisions occurs here when spouses cannot resolve preference differences quickly.

Household Assortment of Goods and Services

Role load configurations have implications for household assortment; however, since goods and services are built up over time, it is necessary to preface this section with a warning that the configuration would have to be stable for some time before assortment effects would be apparent. For the over- and underloaded household, one would predict that labor-saving and convenience items would be skewed toward the overloaded spouse to help him/her reduce the load. On the other hand, considering previous predictions on decision making, it is probable that variants such as brands, styles, and options will more closely track the preferences of the underloaded spouse who may have acted as the household purchasing agent. For households with both spouses underloaded, the lowest incidence of convenience and time-savers should be found, and those which are found should be consistent with jointly-agreeing preferences. On the other hand, the greatest incidence of these assortment items should be found in the household characterized by both role overloaded, and the items should represent diffused preferences due to autonomous purchases and lack of joint decisions on specific variants.

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HOUSEHOLD DURABLE GOODS ACQUISITION BEHAVIOR:
A LONGITUDINAL STUDY

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Abstract

The concept of "priority" or sequence of acquisition reflecting the order in which households acquire items has been one of the dominant paradigms employed for understanding durable goods consumption and purchase decision behavior. So far, studies have only examined the issue descriptively using cross-sectional ownership data. The present study tests a theoretical and predictive model of durable goods acquisition behavior based upon thirteen years of decision, consumption, and ownership behavior for the same households. The results indicate that the proposed model has strong explanatory and predictive capabilities.

Introduction

The acquisition and consumption of household durable goods continues to be a topic of interest among marketers and researchers. A review of the literature indicates the perspectives of economists (durable good forecasts), sociologists (household decision behavior), and psychologists (individual consumer behavior) have contributed to the body of knowledge regarding household durable goods behavior. Yet, as evidenced by the recent research grants awarded by Marketing Science Institute, issues regarding the consumption of household durables remain unanswered.

The current research in this area by consumer researchers can be classified into two types: 1) Descriptive analyses of planning processes and household types (Cox, Granbois, and Summers 1983, Corfman and Lehman 1985) and 2) determination of acquisition and consumption patterns of household durable goods (Kasulis, Lusch, and Stafford 1979, Dickson, Lusch, and Wilkie 1983). While past research has produced useful conceptual frameworks for addressing the issues discussed above, the methodologies employed have suffered from several serious limitations. For example, the shortcomings of the Guttman Scalogram analysis technique, employed in both the Kasulis et al. (1979) and Dickson et al. (1983) studies have been clearly addressed in the research literature (Clogg and Sawyer 1981). In addition, research to date has attempted to model household durable goods behavior as a static point in time based upon cross-sectional data (Cox, et al. 1983, Corfman and Lehman 1985) instead of examining the phenomena for the same household from a longitudinal perspective.

The present study attempts to address four critical issues regarding the acquisition and consumption of durable goods. Specifically, the paper presents the results of an investigation which:

1. Examines the underlying structure of durable goods acquisition and consumption patterns of the same households over a 13-year period.
2. Develops a classification of household types based on their durable goods acquisition and consumption behavior.
3. Tests a theoretical framework of why households acquire and consume durable goods in the manner in which they do.
4. Tests a model for predicting future acquisition of household durable goods.

Two modeling techniques, latent structure analysis (LSA) and partial least squares (PLS), are applied to data from the Illinois panel study of consumer decision processes to describe and predict the acquisition and consumption of household durable goods. The next section provides a brief critique of the research in this area. Next we discuss the sample and the two analytical techniques employed in the study. Finally results are presented and discussed and suggestions for future research are offered.

Review of the Literature

One outcome of research in this area has been the classification of households based on their durable goods ownership and/or purchase plans. Alderson (1957) refers to the process as household durable goods assortment management. It is based on the premise that all newly formed households start out with a "starting set" of durable goods acquired through gifts, purchases, lease/rentals, previous ownership, or as part of the initial home dwelling. Future durable goods acquisition and consumption becomes a function of this "starting set."

Newly formed households are seldom able to purchase the complete set of durable goods necessary to fully furnish and stock a household. Thus families (primarily husbands and wives) must decide on an order of purchase, and a decision plan regarding how these purchases will be made over time. The idea of an ordered sequence or priority pattern reflecting the process by which households acquire durable goods has received considerable attention from researchers (McFall 1969, Lusch, Stafford, and Kasulis 1978, Kasulis, Lusch, and Stafford 1979, Dickson, Lusch, and Wilkie 1983). Evidence from these studies supports the contention and demonstrates the existence of some underlying priority pattern or order in which household durable goods are purchased.

A study reported by McFall (1969) found an acquisition priority pattern for a set of "comfort" products (electric blanket, washing machine, room air conditioner, and dishwasher) from which it was concluded that a household which owns a dishwasher also owned the remaining three durable goods. A similar acquisition pattern of household "comfort" durable goods was found by Lusch et al. (1978) in a cross-sectional survey of over 1,800 households (washer, dryer, dishwasher, freezer, and microwave ovens). Both studies used the actual ownership of durables as the basis for determining acquisition patterns. While such studies established that there are indeed a common set of durable goods that are purchased by households, the prediction of future acquisition behavior is poor due to the lack of consideration of future purchase priorities or changes in household circumstances.

The relationship between planned purchases and actual purchase behavior has always been tenuous at best. Dickson and Wilkie (1978) found that there were a large number of unfulfilled durable purchase plans (and purchases made with no plans) when compared to the households reporting purchase plans. One reason put forth by researchers to explain the lack of correlation between planned and unplanned purchase of durable goods has been changes in household circumstances. Pickering (1975) found that multiple reasons were often given, but household financial problems and changes in priorities were the most frequent reason given for households not following through with durable goods purchase intentions.

Beyond the "starting set," Granbois (1977) suggests that four reasons account for household durable good acquisition: 1) Maintenance Replacement, 2) Adjustment/Upgrading Replacement, 3) Additional Unit Expansion and 4) First Acquisition Expansion. More recently Cox et al. (1983) found that while such acquisition categories partially explain the variation in household durable purchase behavior (search, satisfaction, and payment method) the researchers were skeptical about interpreting its generalizability beyond the reported study.

While the brief review provided here only touches the surface, the findings are indicative of the state of the art regarding household durable goods acquisition and consumption behavior. For a detailed review the interested reader is referred to Dickson and Wilkie (1978). Our study is a step toward identifying the underlying structure of durable goods acquisition behavior with methods which may greatly improve our ability to understand this consumption process.

Methodology

Sample

The data for the present study were collected by the Survey Research Lab at the University of Illinois as part of a much larger study of household consumer decision behavior. The database was constructed from panel data obtained from an initial sample of 311 household couples who were married in Peoria or Decatur, Illinois during the summer of 1968. Eighteen interviews were conducted at regular intervals from the Fall of 1968 through the Summer of 1981.

The sample used in the present study controlled for three key variables to allow for the tracking of the same households over time (13 years). Specifically, only married couple households who stayed together for all eighteen waves of the panel study, who rented their living quarters, and who owned only one car were selected for the present analysis. Unfortunately, such controls which help to increase the integrity of the data, cost in terms of a reduction in sample size. Thus an initial sample size of 311 was reduced to 146 which decreased to 61 households by the time of the last interview. Yet, during this time period over 1600 durable good purchases were made.

Data

The data available for this study are particularly conducive to the examination of proposed theoretical relationships of durable goods acquisition and consumption behavior. The same households have been traced over 18 waves of data collection. For the purposes of this study, data have been aggregated over time to reflect the stages of the household life cycle (Bristor and Qualls 1984). Specifically, waves 1-5 were treated as newly formed households, waves 6-9 as early adaptive households, and waves 10-14 as late adaptive households. Waves 15-18 (mature households) were intentionally held out for predictive purposes.

The set of durable goods examined included a diverse set of goods which are typically found in a household. Ten (10) household durables composed the set of goods examined over the life cycle of the study. Specifically, they included first car, washing machine, stove, refrigerator, dryer, color TV, stereo, second car, freezer, and dishwasher.

The dependent variable for the PLS models is future durable ownership. The independent variables include prior ownership and likelihood to buy (LTB). Prior ownership refers to the set of durable goods held by a household at a given point in time. LTB is defined as the probability of purchasing a given durable good at some future time period. Only households with a 75 percent chance or

better of purchasing some durable goods were included in the actual analysis.

Method of Analysis

In the present study, two structural modeling techniques are employed to analyze the durables' purchase data to investigate their efficacy in describing acquisition patterns and predicting future household purchase behavior. The two techniques employed allow the use of categorical data, which is typical for most durable goods acquisition and consumption studies. Latent structure analysis and partial least squares are used to analyze the data.

Latent Structure Analysis

Latent structure analysis (LSA) is a technique used to describe a set of models whose purpose is to mathematically assign observations to one or more unobserved (latent) classes. The objective of LSA is to characterize latent variables that explain the observed relationship between theoretical constructs. LSA evolved from Guttman's early work and was conceptualized by Lazarsfeld in the 1950s and further developed by Lazarsfeld and Henry (1968).

A latent class model can best be described as a "data unmixing procedure" which starts with data in the form of a multiple contingency table that determines the association between the categorical variables making it up. The technique assumes that there are a certain number of manifest (observable) variables (i.e., A,B,C) each with a given number of levels (i.e., $i = 1, 2, \dots, I$, $j = 1, 2, \dots, J$, $k = 1, 2, \dots, K$). As such the relationship among A, B, C can best be explained by a single latent factor reflected by X with T classes; based upon the probability that an individual is in a specific cell of the contingency table. Specifically:

$$\Pi_{ijkl}^{ABCX} = \Pi_T^X \Pi_{iT}^{\bar{A}X} \Pi_{jT}^{\bar{B}X} \Pi_{kT}^{\bar{C}X} \quad (1)$$

Where

Π_T^X = is the probability that an individual is in the t'th class of the latent variable X,

$\Pi_{iT}^{\bar{A}X}$ = is the conditional probability that an individual is in the class i, j, k of variables A, B, C given that he/she is in class T of variable X.

Lazarsfeld and Henry (1968) suggest that "Within a latent class T, responses to different items are independent. The within class probability of any pattern of response to any set of items is the product of the appropriate marginal probabilities." Once the probabilities of class membership in A, B, C and X, have been estimated, the fit between the observed proportion (Π) and estimated proportion ($\hat{\Pi}$) of a specific model can be assessed via two different test statistics: (1) Pearson Goodness of fit Chi square (2) A Chi-square based upon the likelihood ratio criterion.

The application of LSA techniques to marketing problems is not new as evidenced by the literature, (Green, Carmone, and Wachspress 1976, Dillon, Madden, Mulani 1983, Clogg, and Munch and Callahan 1983). The basic purpose of using LSA in the present study was to determine whether or not an underlying structure for durable goods acquisition classes over a period of 13 years could be identified. The computer program Maximum Likelihood Latent Structure Analysis (MLLSA) was used for the analysis.

One of the objectives of partial least squares (PLS) is to maximize the explainable variance of both latent and manifest variables. PLS is a predictive structural modeling technique which estimates a model's parameters through a series of ordinary least squares regressions, deriving its predictive power by minimizing residual variances. Unobservable variables are estimated as exact linear combinations of their empirical indicators

$$\eta = \Pi_{\eta} y \text{ and } \xi = \Pi_{\xi} x$$

where Π_{η} and Π_{ξ} are regression matrices. The model is estimated via a set of weights/loadings which describe the relationship between unobservable and observable variables. Unlike the more popular structural modeling program: Lisrel, PLS is more robust regarding assumptions about the population, measurement scales and distribution, (Wold 1980).

Lohmoller's LVPLS 1.6 computer program was used to generate the analysis. PLS as a structural modeling technique is beginning to receive considerable attention in the marketing literature (Fornell and Bookstein 1982, Fornell and Larcker 1981, Fornell and Robinson 1983). Recent work by Wold and Bertholet (1985a, 1986b) has shown that model building techniques using PLS estimation procedures are applicable when analyzing multidimensional contingency table analysis.

Results and Analysis

LSA is used to uncover the underlying structural classes of household durable goods and acquisition behavior. The LSA model was run as 1, 2, and 3, latent hypothesized classes and tested on each of the first three waves separately and on the panel as a whole. In comparing the 1, 2, and 3 class models, we found that the three class model fit best in terms of a maximum likelihood Chi-Square ($p = .99$), a Pearsonian Chi-Square ($p = .99$), and an index of dissimilarity (.0002) generated by the MLLSA program. These three indices indicate that the three class model is consistent with the data.

Since we are interested in the underlying structure of durable acquisition behavior, and the amount of each set of durables within each latent class, one can reconstruct a contingency table from the final conditional probabilities, generated in the MLLSA program. The set of durable goods were grouped into four categories based upon the three latent class model of waves 2-14. The categories are:

- 1) Primary transportation: Replacement of first car given one and only one car owned at the beginning of the study (represents the sample control category).
- 2) Basic household: includes the stove, refrigerator, washer, and dryer.
- 3) Standard luxury: includes second car, color TV, and stereo.
- 4) Luxury comfort: includes the dishwasher and freezer.

LSA derived conditional probabilities for the items within the 3 latent classes. While several predictions are close, most are completely inaccurate. Table 1 summarizes these findings. In attempting to explain the lack of convergence between actual and predicted durable purchases, one can look at the way the final conditional probabilities are calculated. The researcher must make initial estimates of the conditional probabilities based on a hypothesized theory regarding the nature of the underlying latent classes. Unless these initial estimates are close to the real estimates, there will be a large variance between estimates and actual behavior. While the MLLSA program will usually converge to a solution, the longer it takes to converge, the less accurate the estimated probabilities will be. The results

TABLE 1

ACTUAL VERSUS PREDICTED PURCHASES OF DURABLE GOODS
LATENT STRUCTURE ANALYSIS

Latent Classes	Newly Formed	Early Adaptive	Late Adaptive
Primary Transportation	94/108*	<u>124/133</u>	107/82
Basic Household	239/47	<u>249/277</u>	84/39
Luxury Entertainment	111/471	168/378	<u>92/86</u>
Luxury Comfort	<u>8/5</u>	67/577	59/354
Latent Class Probabilities	.32/.34	.43/.41	.25/.25

*Actual/Predicted

from the present analysis converged after 45 iterations which is relatively few but still generated inaccurate conditional probabilities.

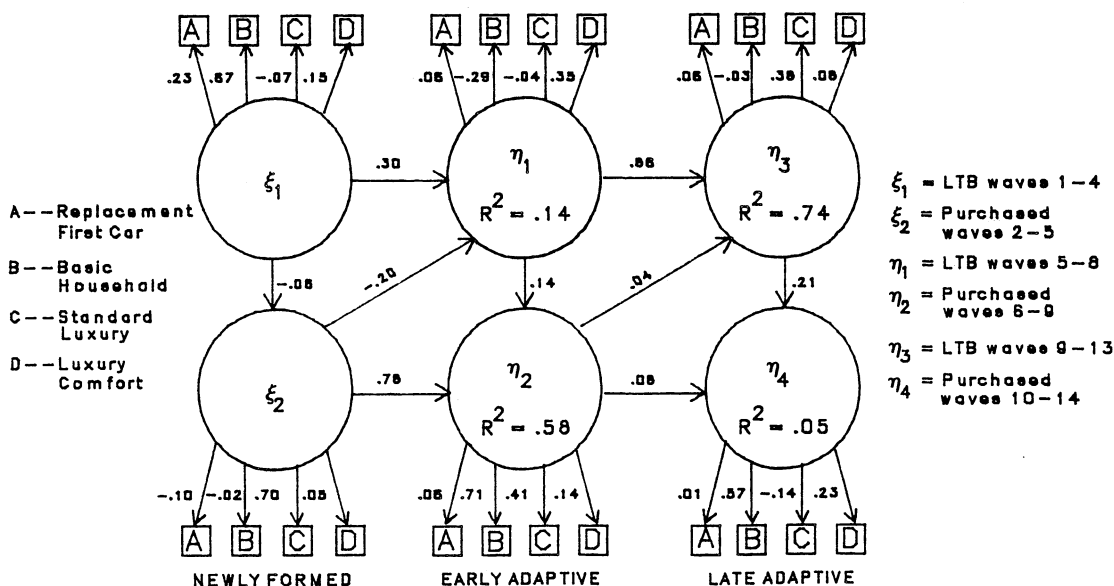
While the identified latent classes are not intended to be exhaustive of all possible categories, it represents a reasonable way to classify households over its life cycle (HLC). Based upon the classifications, the data were then subjected to PLS analysis testing the latent class model uncovered by LSA.

PLS Analysis of the Three Latent Class Model

To test the existence and impact of the three latent class or household type model, the model presented in Figure 1 was analyzed via PLS. As the model illustrates, there are four manifest variables for the first latent variable: likelihood to buy (ξ_1), corresponding to the four durable categories mentioned earlier. The manifest variables of the second latent variable (ξ_2), represent the set of durable goods acquired by newly formed households during waves 2-5 (a period from 7/69 to 2/71). Measures of likelihood to buy were obtained from each household for each durable product and averaged across categories within household types. It is hypothesized in the present model that the likelihood to buy and present ownership of durables is a strong indicator of future household durable good acquisition and consumption behavior. Over the life cycle of the household as ownership and acquisition patterns change, the likelihood of buying specific household items should change, and vice-versa. Thus there should be a positive relationship between likelihood to buy and durable good purchase behavior. Figure 1 summarizes the results of the PLS analysis and indicates that in the earliest stage of the HLC, there is no relationship between LTB and purchase behavior. In the later part of the HLC, LTB is positively related to acquisitions and increases in influence from the early adaptive to the late adaptive stages. Acquisitions in the newly formed stage have a strong, positive influence on acquisitions in the early adaptive stage but, although positive, the strength diminishes in the later stages. The explained variance captured by (η_1), (η_2), and (η_3) is encouraging.

In examining the loadings on the indicators of the Acquisition Latent Variables, one finds that Standard Luxury items represent the acquisition pattern of the newly formed household. This is not unexpected in that all families started early with one car and it is unlikely that it was replaced early in the HLC. Further, since these couples are renters, they probably had access to the basic household items. In the early adaptive stage, the acquisition of Standard Luxury items decreases while couples begin to acquire the Basic Household items. The replacement of the first car increases from -.10 to .06

FIGURE 1
THEORETICAL MODEL OF DURABLE GOODS ACQUISITION BEHAVIOR
A PARTIAL LEAST SQUARES ANALYSIS



indicating some replacement activity. Five years had elapsed from the beginning of the survey to the end of the early adaptive stage so this behavior is not unexpected. In the late adaptive stage, the acquisition of Basic Household items continues and Luxury Comfort items become prominent. The increase of the Luxury Comfort items in this late stage is a reasonable expectation.

In general, the PLS analysis provides the researcher with some useful insights regarding household durable goods acquisition. Early models of durable goods acquisition behavior were never able to detect such changes in priorities. Such changes should have a big impact upon predictions of future durable goods acquisition behavior and, therefore, should be explicitly modeled into durable good forecasts. This issue is addressed in the next section.

A Predictive Model of Household Durable Goods Acquisition

A third objective of the present paper has been to develop a method for predicting household durable good acquisition behavior. Using the last three years of ownership data obtained from the household panel data base for validation, a predictive model of what durables would be acquired during the next stage of the HLC was developed and tested. Thus a model (Figure 2) was constructed in an attempt to predict durable purchases during waves 15-18. Again the two major determinant variables hypothesized in the model include, 1) likelihood to buy (ξ_1) and 2) durable ownership (ξ_2) (as of wave 14). Since the actual purchases of the last three years had been held out, the present study is able to compare the predictive purchases with the actual purchases of durable goods by the households. The results of the predictive test are presented in Figure 2 and Table 2 respectively.

The path analysis has the signs that one would expect. Household durables which people now own are negatively correlated with what is to be purchased during the next three years. Conversely, the likelihood to buy is positively correlated with future purchase behavior. The comparative results of the model are presented in Table 2. As can be seen, predictions for primary transportation and standard luxury durable goods are quite good,

FIGURE 2
PREDICTIVE MODEL OF HOUSEHOLD DURABLE GOOD ACQUISITION
PARTIAL LEAST SQUARES ANALYSIS

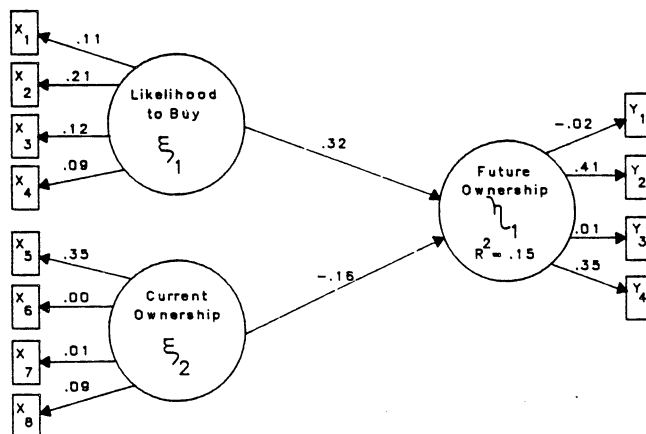


TABLE 2
PREDICTED VERSUS ACTUAL PURCHASES OF
HOUSEHOLD DURABLE GOODS
PARTIAL LEAST SQUARES ANALYSIS

	Primary Trans.	Basic H.H.	Luxury Ent.	Luxury Comf.
Present Ownership	61	61	60	50
Likelihood to Buy	5	5	6	1
Actual Purchases	50*	55	72*	33
Predicted Purchases	51*	93	73*	81

N = 61

*Approximately Equal

while the prediction of basic household and luxury comfort goods are poor.

The reported path coefficient (.32) is reasonable for the likelihood to buy link to future ownership. Support for the findings of earlier studies which suggested a poor relationship between planned purchases and actual purchases was not found. It should be remembered that only households which reported a 75 percent or greater probability of purchase of a certain set of durable goods were used in the analysis. As a result, sparse LTB data may destabilize PLS estimations. Conversely, the poor explanatory power of the hypothesized model ($R^2 = .15$) suggests that there are other factors which come into play which affect the household durable purchase and acquisition process.

Discussion and Conclusions

The purpose of this paper has been to expand upon earlier research on household durable goods acquisition and consumption behavior. Specifically, a model was developed and tested which explains and predicts durable goods acquisition behavior. The present research has led to what may be classified as a theoretical framework of durable goods acquisition and development of a base from which to conduct future research.

The present study is an improvement over earlier studies in three ways. First the durable decision and purchase behavior of the same households are tracked and analyzed over a thirteen-year span; previous studies only examined the issues cross-sectionally at specific points in time (2 years). Second, the study is one of the first attempts to develop and test a theoretical framework of durable goods acquisition behavior. Both behavioral (likelihood to buy) and structural (position in HLC) influences are modeled to explain variations in household behavior. Finally a predictive model based on a theoretical framework is tested and partially validated.

Two analytical techniques (LSA and PLS) were employed to improve upon the methodologies used in earlier studies. LSA proved to be a useful technique for determining the underlying durable acquisition structure for households. Three latent classes appear to be a reasonable representation of the underlying structure of the data. Despite the problems with the final conditional probabilities of cell membership, the use of LSA in this application is an improvement over similar studies using Guttman Scalogram Analysis.

The results from the PLS analysis also suggest an order of acquisition with respect to household durables. During the newly formed HLC stage, households can be characterized by an ownership preference for basic household items and luxury entertainment goods. Conversely, by the end of the first stage of the HLC, luxury comfort items were not heavily stocked by households (despite the high loading) and there is very little emphasis on the replacement of the family's first car. During the adaptive stage of the HLC a shift from luxury entertainment and luxury comfort goods to the replacement of the first car is suggested. The acquisition pattern uncovered via PLS is a better predictor than previous models given the addition of other explanatory variables (i.e., LTB). Yet, the discrepancies regarding the direction and strength of the hypothesized relationship should temper the explanatory power exhibited by the model.

The managerial usefulness of identifying durable goods acquisition patterns is well documented. Specifically, marketers interested in forecasting consumer demand and/or targeting market segments would be interested in such results. As such the predictive model tested should be of value to marketers. Although the explanatory power of the model is low, the hypothesized relationships generally carried the expected signs and are in the right direction. This would suggest that there are additional

influences not accounted for in the hypothesized model that should be investigated in future research.

Theoretically, future research could address the issue of refining the model by adding additional explanatory variables and retesting the model. For example, household factors such as role structure, occupation, and income could aid in increasing the explanatory power of the model.

Finally, the two analytical techniques (LSA and PLS) appear to be complimentary in their relationship. Together they appear to offer researchers insight and improvements, not found in other methodologies. Thus the study of acquisition patterns coupled with the LSA and PLS methodologies can be a fruitful avenue for marketing researchers and practitioners.

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CONSUMER SOCIALIZATION IN DIFFERENT SETTINGS:
AN INTERNATIONAL PERSPECTIVE

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Abstract

Consumer socialization researchers are turning their attention beyond childhood, and beyond national and cultural boundaries. This paper provides a conceptualization of childhood socialization variables which may vary across cultures, and which are important for the theoretical and applied aims of research in the area. Data are presented from a study of American, Japanese and English families. Results show cultural variation in children's television watching behavior, but not in age-related patterns of product requesting behavior; an exploratory cluster analysis identifies general and consumption-specific family interaction variables characterizing Japanese and American families.

Introduction

The purpose of this paper is to assess similarities and differences across cultures of key variables in consumer socialization research. The focus is on childhood consumer socialization--specifically, children 3-10 years old--recognizing that the parameters of socialization research are expanding to include changes throughout the life span.

As many companies seek global markets, and as technological innovations make possible instant communication among countries, a major debate in marketing is whether global markets are truly similar, or whether there are important differences across countries and cultures. Levitt (1983), for example, speaks of a "homogenizing commonality" characterizing global markets, while Wind (1985) argues that marketing practices must reflect subtle but powerful differences across countries and cultures.

For marketing practitioners, the issue is crucial: to what extent must product modifications be made to insure successful marketing from one culture to another--and what product modifications? To what extent can similar marketing programs, advertising appeals, and the like, be used across cultures? How can similarities and differences across cultures be identified and understood so that appropriate products can be designed, and effective marketing programs can be implemented?

For consumer researchers, the issues are different, but no less crucial. Beyond descriptive differences between cultures, are there fundamental differences in consumer behavior processes? Are there differences in consumer needs, motives, goals, expectations, information-processing and sources of satisfaction across cultures which reflect more than structural differences, such as annual income, product availability, literacy levels, media penetration and the like? For consumer socialization researchers, the issues are somewhat more focused: what are the cultural differences in processes that characterize the acquisition and use of consumption-related skills, knowledge and attitudes?

From a theoretical perspective, identifying and understanding consumer socialization differences across cultures would advance the field by specifying the concepts, theories and variables which characterize consumer behavior in different cultures. For example, to what extent are the relative roles and interactions among family, media and peers identified in the more plentiful American research base similar to those in European countries or Far Eastern countries?

From a more applied perspective, the childhood consumer socialization questions are crucial. Should a marketer of "child relevant" products such as snack foods and toys market the same products, with the same appeals, in different cultures--recognizing that there may be some structural differences in the availability and suitability of advertising media, distribution, and the like? Do children want the same kinds of products worldwide? Do they select and evaluate things they want through their parents in similar ways, with similar outcomes?

We suspect that most consumer researchers would say that there are some differences and some similarities, but would tend toward the view that patterns of consumer behavior are quite different across cultures (despite the enormous success among young people of Gino's Pizza, Kentucky Fried Chicken and McDonald's in cultures as diverse as Great Britain, Japan, and Thailand, which would likely be dismissed as mere "case examples")! The issues would seem to be what differences are important for the theoretical and practical aims of the field, and the objective of this paper is to conceptualize and empirically identify some of those differences.

A few definitions and "rough cuts" are in order. First, we will use the terms "culture" and "country" or "nation" interchangeably, recognizing there are differences among these terms. However, data presented in this paper are from families in Japan, England, and the U.S., which are different nations and "cultures" in the sense that they differ in the "totality of socially-based and transmitted behavior patterns, arts, beliefs, institutions and other products of human work and thought characteristic of a community or population (Goslin, 1971).

Second, our focus is on "advanced" cultures, in the sense that all three are relatively urban, industrialized, literate, and wealthy. Moreover, our analysis is limited to countries which feature the role of the nuclear family. While Japan was a great many more extended families than England or the U.S., the family as a socializing agent is important, compared to cultures in which commune or tribal life is more primary.

The focus on "advanced" cultures permits us to focus on socialization processes and variables without the confounding effects of other variables in less "advanced" cultures. For example, some of the core motives for consumption among Americans--to fulfill diverse needs, show achievement, attain social status, and the like--are likely to be present in other relatively "advanced" cultures, but less prevalent in cultures which are "less developed" in the usual sense of that term. Similarly, product meanings such as comfort and quality may be quite different in less advanced cultures, and the inventory of present and desired goods may also be different (although this difference may be disappearing). (One writer noted that a decade ago the Chinese desired 'four things that go round'--a bicycle, a watch, a sewing machine and an electric fan. Now many Chinese aspire to own 'eight new big things'--a camera, a tape deck, a television set, a refrigerator, a motorcycle, a washing machine, an air conditioner and a video recorder; Mann, 1986.) In any case, the "basket of goods and services" in households in our data base are likely to be similar, compared with a household in a less developed culture.

Conceptualizing Cultural Variations for Consumer Socialization Research

Consumer socialization researchers are invariably interested in processes by which phenomena change, even if those changes are most often assessed via cross-sectional designs, as opposed to longitudinal research. Additionally, consumer socialization research focuses on the interactive effects of complex stimuli, including institutions (such as school), mass media, as well as social influences. In addition to such stimuli, socialization researchers focus on information-processing, broadly defined as processes by which stimuli are selected, evaluated and used in consumer decisions, and on ultimate responses.

Given the interests of many socialization researchers in stimuli, information-processing and responses, the question is: to what extent do these aspects of consumer socialization vary across "advanced" cultures? Table 1 suggests some research-based possible similarities and differences.

TABLE 1
ASPECTS OF SOCIALIZATION

Stimuli (Influences)	Information-Processing	Responses (Outcomes)
<u>Similarities</u>		
-Products in which children are especially interested (e.g., toys, snacks)	-Cognitive development stages	-Some intra-family events, e.g. age-related patterns of product request frequency
<u>Differences</u>		
-Advertising appeals, format, media	-Selection, evaluation and use of product information	-Other intra-family events, e.g., family structures and norms
-Amount of exposure to advertising		-Opportunities for consumption
-Advertising and broadcast systems, regulations		
- Parent-child interaction		

SIMILARITIES AND DIFFERENCES IN ASPECTS OF CONSUMER SOCIALIZATION ACROSS ADVANCED CULTURES

"Stimuli," or influences on socialization processes, may be similar or different across advanced cultures. It appears that children desire similar kinds of products across cultures, although product forms may vary. For example, all children desire food products, but American children like cereals and British children like tea. Children are exposed to advertising for these products, but there are some variations in advertising appeals, media, executions, and in the regulations and structure of broadcast advertising. For example, there are major differences in the broadcast systems and advertising practices, as information in the Appendix indicates for our three cultures.

Moreover, while early studies of children's responses to advertising in England and in the U.S. were remarkable in that their findings were highly similar, (Himmelweit, et al., 1958; Schramm, Lyle and Parker, 1961), it is reasonable to assume that children's viewing behavior varies across cultures. These differences are expected because of variations in broadcast systems and advertising presentations, family norms about viewing and advertising, and the relative novelty of television advertising in countries with mixed commercial and non-commercial broadcast systems. Simply stated, children in different cultures probably watch television differently: they may watch varying amounts of commercial television, pay more

or less attention, and co-view with parents at different rates, depending on television advertising's novelty, and its utility for them.

While we do not know of any systematic content analyses of advertising to children in different cultures, we hypothesize that there are differences in the format, content, and types of appeals in advertising to children. Data do indicate differences in the degree of television's household penetration, the amounts of television children watch, and the amount of commercial television to which they are exposed. We also hypothesize--although we find no data on the point--that television is the primary advertising medium to which children are exposed in "advanced" cultures, but that other media, such as in-store displays and posters vary in their prevalence and influence across cultures.

Other "stimuli," include social influences--particularly of parents, in the case of childhood socialization. Studies have been conducted comparing some aspects of socialization practices by parents in the U.S., England and Japan, although no study has directly compared all three countries. It appears that English children experience more rigid and authoritarian parents than do American children. The latter are subjected to less physical punishment, and enjoy more nurturance and warmth than English children. Perhaps these differences account for English children's greater peer-orientation and less time spent with family members, compared to American children (Devereux, 1969, 1970).

Studies comparing American and Japanese families indicate that the latter are characterized by high maternal warmth, but fathers are more emotionally distant from their children. Japanese families stress parent-child contact, family interdependence, and parents exert more control over their children than do American parents (Ezra and Vogel 1968; Inomota and McGinnies 1971; Shigaki 1983).

Regarding "Information Processing" in Table 1, cognitive development researchers have demonstrated the invariance of cognitive stages across cultures (Kohlberg, 1971). However, while cognitive development stages usefully characterize children's age-related processing capabilities and characteristics, we hypothesize that there are cultural differences in the nature and degree of children's values, goals, and interests, which, in turn, should affect aspects of information-processing, such as selection and evaluation of product information.

Finally, regarding "Responses," in Table 1, we hypothesize similarities in age-related patterns of children's requesting behavior. Research among American children suggests that children request fewer products as they grow older, reflecting "passive dictation" (i.e., parents come to know children's product and brand favorites, so explicit requests become unnecessary), children's increasing purchasing autonomy, and their developing understanding that they must be selective in their product requests in order to achieve success.

We hypothesize differences in children's responses to socialization stimuli, due in part to family processes, and to structural characteristics of different cultures. For example, we expect that family norms in different cultures vary in the extent to which children's requests are rewarded or not. Moreover, children's opportunities for consumption should vary as a consequence of living patterns and product availability. For example, there are many more retail outlets per capita in countries such as Italy and France than in the U.S., and relatively more children living in urban areas, so products may be more accessible than for American children.

Empirical Analysis

Data were gathered in a diary study in the three countries. Mothers kept daily diaries of their children's television viewing behavior, and their product requesting behavior, for two weeks. The procedure was a replication

and extension of an earlier study by Isler, Popper and Ward (1979).

The sample included 84 U.S. families, 118 Japanese families, and 65 English families, stratified by age groups: 3-4, 5-7 and 8-10 years old, roughly corresponding to early and later pre-operational and concrete-operational stages of cognitive development. Families were selected only if they had between two and four children, and had both a mother and a father living at home. This was done to avoid particular problems which may attend very small or very large families, or one-parent households. Families were drawn from middle socio-economic strata. The study is exploratory, due to the small sample size and lack of truly random sample selection procedures.

Each respondent was trained to unobtrusively observe and record the purchase requests and television viewing behavior of one child in the household between the ages of 3 and 10 years of age. At the end of the two-week period, a separate questionnaire was administered to gather additional information, on parent-child communication, conflict etc.

Families were initially recruited by telephone. A personal visit then followed to deliver and explain the materials used in the study. Participants were further instructed to telephone the researchers if questions or problems arose during the study. Researchers assured that mothers properly understood the materials and were committed to conscientious completion of the tasks described.

Care was taken in the translation of the diary materials into Japanese and in the wording modifications for the British version. Some "back-translation" was done to ensure accurate translation of the Japanese diary. There was no attrition in the Japanese study; about 6 mothers dropped out or provided incomplete diaries in England, and 8 mothers did not complete materials for the course of the study in the U.S.

Results

Three results are presented here, which bear on the conceptualization on cultural differences presented above.

The first result concerns our hypothesis that children watch television differently in the three cultures. There are several dimensions to the phenomenon of how children watch television. First, there are differences in the total amount of time that children watch. Children in the U.S. and Britain watch equivalent amounts (about 11.3 hours per week) versus 7.3 hours per week for Japanese children. While these differences are significant ($F = 17.99$, $df 2, 264$, $p < .05$), the number of hours is low compared to Nielsen reports for American children, perhaps suggesting some systematic under-reporting, but also perhaps reflecting the fact that the diary study was conducted in spring and summer months.

Another aspect of children's television watching behavior is the extent of co-viewing with parents. Overall, children watched with parents 46% of the time. However, Japanese parents and children were more likely to co-view (50% of the time) than American families (37%). English families reported co-viewing levels similar to the Japanese (48% of the time).

Finally, children's viewing behavior was assessed in terms of their attention to advertising, controlling for the amount of time spent watching commercial television. Results (Table 2) show marked cultural differences. Interestingly, while young children show similar levels of attention to advertising, Japanese children, who watch the least television, show the most marked decrease in attention with age. There is a significant age by country interaction ($p < .05$), suggesting that the utility of advertising differs markedly to children at different ages in the three cultures. It may be that American children

develop sufficient information selection skills by about age 7, so that they begin to pay less attention to advertising. However, British children pay more attention with age, perhaps because of their greater peer-orientation and independence from the family, and their greater purchasing autonomy. In Japan, perhaps, rules about purchase requests reduce the utility of advertising, beginning at a very young age.

TABLE 2

CHILDREN'S ATTENTION TO TELEVISION
ADVERTISING BY AGE AND COUNTRY:
ANOVA RESULTS

Source of Variation	Sum of Squares	Degrees of Freedom	F
Country	12.021	2	13.568
Age Group	0.098	2	0.111
Country X Age Group	4.601	4	2.596
Residual	114.194	258	
Total	131.026	266	

The second analysis concerns our hypothesis that children will not vary across cultures in their age-related patterns of purchase requests: we expect these to decrease with age, regardless of culture. A two-way analysis of variance (age group by country) confirms our expectation (see Table 3). There is no age by country interaction, but the main effects are significant, and the data show a decrease in the number of requests as age increases. Japanese children show lowest levels of requesting behavior across age groups.

TABLE 3

CHILDREN'S PURCHASE REQUESTS
BY AGE AND BY COUNTRY:
ANOVA RESULTS

Source of Variation	Sum of Squares	Degrees of Freedom	F
Country	5450.290	2	36.742
Age Group	591.624	2	3.988
Country X Age Group	279.177	4	.941
Residual	19135.936	258	
Total	25392.727	266	

Cultural Dimensions of Parent-Child Interaction: Cluster Analysis Results

To explore cultural differences in social influences on consumer socialization processes, a cluster analysis of two sets of variables was run using the Howard-Harris routine. The first set consisted of Schaefer's measures of Affect, Dependency and Control dimensions of mother-child interaction (Schaefer 1971). The other set of variables consisted of measures of different kinds of consumer socialization practices of parents, based on previous research (Ward, Wackman and Wartella, 1977).

Three clusters were derived, and are described in Table 4. Cluster 1 consists primarily of Japanese children and nearly equal proportions of children from three age

groups. Cluster 2 consists primarily of American children, and contains somewhat more 5-7 year olds; Cluster 3 is a small one, with somewhat more American and British children, and 8-10 year-olds.

Detailed findings are presented in Table 4. Overall, there are marked differences, especially between Clusters 1 and 2. Parent-child interaction in Cluster 1 is characterized by relatively quiet and introverted children who are dependent on their parents. These children are from lower socio-economic households (although "low" in this case means toward the lower end of a distribution of middle-SES families). Regarding consumer variables, these children experience the most rules governing consumption behavior, requests and parental yielding. Regarding parental methods of training their offspring in consumer skills, Cluster 1 parents are the least demonstrative, expecting their children to learn through observation and modeling, and through trial and error.

TABLE 4
CLUSTER PROFILES

MEASURES	CLUSTER 1	CLUSTER 2	CLUSTER 3
N	129	98	40
% of Total Sample	48.3%	36.7%	15.0%
COUNTRY REPRESENTATION	5 (3.9%) US 101 (78.3%) Japan 23 (17.8%) GB 129	57 (58.2%) US 10 (10.2%) Japan 31 (31.6%) GB 98	22 (55.0%) US 7 (17.5%) Japan 11 (27.5%) GB 40
AGE	33.3% 3-4 31.0% 5-7 37.7% 8-10 100.0%	23.5% 3-4 49.0% 5-7 27.5% 8-10 100.0%	27.5% 3-4 37.5% 5-7 35.0% 8-10 100.0%
AFFECT	Children are perceived by parents as tending not show off skills or accomplishments; children are not expressive	Children are expressive and communicate with parents about friends, activities, feelings, & thoughts. They want to share activities and eagerly show off skills.	Close to mean
DEPEND	Children's decisions and behavior are dependent on parents and children seek parent's judgment about most things.	The least dependent behavior is found for children in this cluster. Children are independent in deciding and doing. They enjoy doing things on their own and solving own problems.	Close to mean
CONTROL	Close to mean	Children are obedient. They do not resist parental control and they are not demanding. They do not attempt to control parents.	Children in this cluster are perceived by parents as assertive, disobedient, demanding and difficult to control.
INCOME	Lowest income levels (based on standardized scores)	Highest income levels (based on standardized scores)	Close to mean
CLASS (Social Class)	Lowest level indicated of the three clusters	Highest level indicated of the three clusters	Close to mean
CONSUMPTION RULES	Parents have rules governing the children's consumer behavior (e.g., about spending money, what can be bought and how the child must buy and ask for things).	Parents tend not to have established rules about the child's consumer behavior	Close to mean

LEARN THROUGH EXPERIENCE	Parents encourage their children's <u>learning through observation, by viewing ads, and through trial and error.</u>	Parents do not encourage learning from advertisements, experience, trial and error.	Close to mean
DELIBERATE CONSUMER TRAINING	Parents place less emphasis on teaching children to be good consumers, and rarely discuss consumer matters with children.	Parents feel that is important to <u>teach</u> children how to be good consumers. They deliberately set examples and discuss ads and consumer issues.	Similar to Cluster 2, but parents indicated somewhat less agreement about the importance of teaching consumer skills to children.
TV VIEWING	Slightly below mean	Slightly lower than Cluster 1	Watches the greatest amount of TV
TOTAL PURCHASE REQUESTS	Below mean- children make the fewest Requests of all of the clusters	Close to mean	Above the mean - highest request level
YIELDING	Below mean	Close to mean, though slightly below	Above mean - highest level of yielding

Parent-child interaction in Cluster 2 is quite different. Cluster 2 families are primarily American, while families in the first cluster are primarily Japanese. Families are more expressive and openly affectionate, and children are more independent. They are obedient and non-manipulative, although Cluster 1 and Cluster 2 families are similar on Schaefer's Control dimension, while Cluster 3 families appear to exhibit the most control problems.

Cluster 2 families are higher income. Regarding consumer socialization variables, there tend to be fewer established rules, and parents are far more purposive in their consumer training, preferring directed discussions about consumption to trial and error as a teaching mechanism. Children in Cluster 2 watch the least television, and are close to the mean in requests and yielding. Cluster 3 children, by contrast, watch the most television and exhibit the highest levels of requests.

Summary and Conclusions

As consumer socialization research expands beyond childhood and beyond the United States, familiar questions are--and should be--asked about the extent to which findings and phenomena may be generalized beyond national/cultural boundaries. Obviously, no sweeping answer can be given. Rather, the question is: among many cultural similarities and differences, which are important to advance our understanding of theoretical and applied questions about consumer socialization processes and outcomes?

We have suggested some differences in stimuli, or influences on these processes, information-processing, and in consumer socialization outcomes, or responses. These would seem to be important aspects of consumer socialization which deserve particular attention from socialization researchers seeking to broaden the scope of their work beyond national/cultural boundaries. Research evidence is available to support some of the similarities and differences on these dimensions that we have proposed in this paper. We have presented some data on similarities and differences of two aspects of "stimuli," and on one aspect of "responses."

The two aspects of stimuli included children's television watching behavior, and cluster analysis of parent-child interaction. Differences were found in the amount of television children watch in the three cultures studied here, in the amount of co-viewing with parents, and in attention to television advertising. The exploratory cluster analysis results suggest that there are characteristic family patterns which differentiate Japanese and American families, consisting of general parent-child interaction dimensions, such as affect,

dependency and control, and consumption-specific dimensions, such as the existence of consumption rules, parental orientations toward consumer training, and asking and yielding behavior. In general, Japanese families are more circumspect and children are expected to learn through observation and trial and error. American families are more open, expressive, and children are expected to learn aspects of consumption through more purposive and expressive parental behaviors.

Finally, data were presented on one "response" or consumer socialization outcome. In this case, we hypothesized that children would not vary across cultures in their age-related patterns of purchase requests, and this hypothesis was confirmed by the data.

It is our hope that the kinds of dimensions suggested here will prove useful to consumer socialization researchers who turn their attention to other cultures.

Appendix

Broadcast Systems, Children's TV Viewing, and Regulatory Mechanisms for Advertising to Children in the U.S., England, and Japan

	U.S.	England	Japan
Broadcast System	primarily commercial	mixed: commercial and non-commercial	mixed commercial and non-commercial
Hours Watched/Week	21.3 to 29.7 hours ^a	24.4 hours ^b	15.8 hours ^c
Regulations			
Are there important government regulations?	no	yes	no
Are there detailed voluntary guidelines?	yes	yes	no
Is there preclearance of children's commercials?	yes, by major networks only	yes, industry self-regulatory bodies	no
Are relatively fewer ads allowed during children's prime viewing times?	yes	no	no
Must ads to children be clearly distinguished from programming?	yes, on major networks	yes	no
Can program characters be used in commercials to children?	yes	yes	yes
Are there periods of the day when ads to children may not be broadcast?	no	no	no

a. The 21.3 hours per week in the U.S. is for 2-5 year-olds; the 29.7 hours per week is for 6-11 year-olds. Source: Nielsen (1984).

b. The U.K. figure of 24.4 hours is for children between 5 and 15 years-old. Source: BBC (1981/2).

c. The Japanese figure of 15.8 hours is for children 7-12 years old; viewing by younger children is reported to be higher. Source: Kataoka, (1978).

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MASS MEDIATED CONSUMER SOCIALIZATION: NON-UTILITARIAN AND DYSFUNCTIONAL OUTCOMES

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Abstract

This paper deals with the non-utilitarian and dysfunctional outcomes of mass-mediated consumer socialization. It is suggested that the dominant theories and metatheories may have critical limitations where these type of outcomes are concerned.

The Metatheory of Consumer Socialization

For many important reasons, scientists prefer research which is guided by theories and/or models. Studies grounded in theory are believed more likely to contribute to understanding of phenomena and, at the same time, generate testable hypotheses which help to reduce the likelihood of committing Type I error. Unfortunately, too myopic a focus on a specific theory or too strong a reliance on a particular metatheory or world view may blind the researcher to some potentially important questions. A theory, and the metatheory which guides it, largely determine what should be studied and often times dictate which methodological procedures should be utilized. It must, therefore, be remembered that this also means a chosen theory or metatheory excludes some possible phenomenological content and precludes some methods. This can stifle efforts to truly understand a given phenomenon by limiting our conceptualizations.

In many established disciplines true breakthroughs in knowledge only occurred after revolutionary changes in perspective, or "Kuhn paradigms" came along. These radical changes are, however, naturally very rare. Rather than wait for a Kuhn paradigm to emerge, it is rather the responsibility of the scientist to occasionally suspend the normal stream of research in an effort to determine just how well the guiding theoretical framework is serving the pursuit of knowledge. It is through this process that new theoretical approaches often emerge.

While there are no doubt many areas of consumer behavior which could benefit from a critical examination of metatheoretical orientation, this paper will focus on one particular type of consumer socialization: socialization via the mass media. The dominant socialization theories derive from world views that appear to have critical limitations, either endemic or self-imposed, where the mass media and non-utilitarian outcomes are concerned. It is the purpose of this paper to step back from the dominant theories and explore this particular form of consumer socialization (mass mediated) which may be best examined outside the constraints of the dominant worldviews which have guided past research.

Dominant Theoretical Perspectives

Consumer socialization research in the past decade has been dominated by three theoretical approaches emanating from different metatheoretical perspectives. Perhaps the most frequently invoked theoretical framework guiding consumer socialization research has been cognitive developmental theory (Ward 1974; Ward, Wackman & Wartella 1977). Cognitive developmental theory stems from an organismic model of development with its roots in biology (Langer 1969; Reese and Overton 1970). Indeed, the major proponent of the cognitive developmental theory most often used by consumer socialization researchers is Jean Piaget who was trained not as a social scientist, but as a biologist and zoologist. It should, therefore, not be surprising that cognitive developmental theory views development as a functionally adaptive process occurring for the good of the organism. Change is seen as

occurring in discontinuous, qualitative jumps leading toward progressively higher levels of reasoning. The metatheoretical assumptions inherent in this model may have directed its proponents toward looking for positive, functional changes as the outcome of socialization.

The second most frequently used type of theory in consumer socialization research are interpersonal communication theories and models such as co-orientation and family communication patterns (Moschis 1985; Moore and Moschis 1981). These theories have their roots in the balance theories of Heider and Newcomb. While not concerned with development, they rely on a homeostatic model which, like cognitive development, comes from a biological analogy. Thus, once again, the metatheoretical perspective tends to be toward adaptive, positive outcomes from these interpersonal interactions.

Since the two most common types of theories which have been applied to consumer socialization have both been based on a biological model of man, it is not too surprising that the outcomes of consumer socialization that have been studied are predominantly adaptive, utilitarian and goal-oriented. Even our definitions of the field have been influenced by the pro-adaptive viewpoint inherent in the metatheoretical perspectives guiding these theories. For example, Assael's consumer behavior text (1984; 363) defines consumer socialization as, "the process by which consumers acquire the knowledge and skills necessary to operate in the marketplace." This definition implies a rational and utilitarian type of information acquisition and use, and would tend to direct researchers' attention to only necessary and useful types of dependent outcomes.

Similarly, Ward (1974) defines consumer socialization as the "process by which young people acquire skills, knowledge and attitudes relevant to their effective functioning as consumers." While Ward's definition is somewhat less restrictive than Assael's, it is still premised upon "effective functioning" and therefore, places a great deal of emphasis on reasoned action, cognitive consistency and utilitarian outcomes.

The major consequence of these limited definitions of consumer socialization has been to over-emphasize the acquisition of positive utilitarian skills and knowledge. Typically, dependent variables investigated in consumer socialization studies include functional items such as children's understanding of the purpose of television commercials, their concern with performance related product attributes, their awareness of information source distinctions, attitudes and behaviors involving saving money, purchase requests, and adolescent's knowledge and behaviors at various stages in the product decision making process (Atkin 1982; Moschis 1985; Moschis and Churchill 1978; Moschis and Moore 1979; Ward, Wackman and Wartella 1977). While there have been occasional departures from this exclusive focus on goal-oriented, functional outcomes of socialization with the inclusion of variables such as attitudes towards materialism and conspicuous consumption (Moschis and Churchill 1978; Ward and Wackman 1971), these have clearly been the exception, not the norm in consumer socialization research.

The final major theoretical approach which has been used to explain consumer socialization is learning theory (Moschis and Churchill 1978; Moschis, Lawton and Stampfl 1968). While learning theories are the most commonly used theoretical basis for studies of media effects on children, they have been less frequently utilized in

studies of consumer socialization. None-the-less, several different learning theories (e.g. - Ausubel's learning theory; Bandura's social learning theory) have occasionally been used in consumer socialization studies. All learning theories emanate from a mechanistic model of development in which learning takes place through reaction in terms of antecedent-consequence relations (Bijou and Baer 1963; Reese and Overton 1970). Behavior simply articulates the actions which the environment demonstrates and reinforces (Langer 1969). The emphasis on mechanistic models, therefore, is generally directed toward explaining behavior.

Since learning theory does not rely on a biological model, its world view is not as closely tied to functional or utilitarian outcomes from socialization. Still, consumer behaviorists employing social learning theory have, for the most part, allowed the major research questions to be framed by those interested in functional and adaptive outcomes of socialization. This mechanistic model assumes that people behave as a direct reaction to their environmental stimuli, much the way a machine reacts when one of its buttons is pushed. Just as a machine is programmed to provide useful service when the correct control is activated, the outcome of socialization may be viewed as useful to the extent that the environment is set up (programed) to reward utilitarian knowledge and behavior. This may be a reasonable assumption when the socialization agent is a teacher or a parent, but if a large amount of consumer learning occurs from the mass media as several authors have suggested (Adler et al. 1980; Atkin 1982), then this assumption may be questionable.

A Mass-Mediated Environment

The role of the environment is not just important in mechanistic models, but in organismic models as well. Piaget, for example, viewed true learning and development to be the result of an interaction between maturation and the environment. Therefore, all of these world views require that we look at what the environment offers in order to determine what outcomes are reasonable to expect. Functional outcomes of socialization make sense only if the environment provides and rewards knowledge and behaviors which are logical and goal directed. If, on the other hand, the environment provides incorrect or inappropriate experiences, the outcome will, of course, be erroneous knowledge and beliefs and dysfunctional behaviors.

Since the environment will partially determine what learning will take place, a reasonable way to conceptualize what the outcomes of consumer socialization may be is to consider the dominant inputs. The two major sources of consumer knowledge appear to be parents and the media. While the knowledge, beliefs and behaviors imparted by parents are likely to differ greatly from family to family, the content available from the mass media may be somewhat more homogeneous. Therefore, to fully recognize the type of outcomes likely to emerge from consumer socialization, a good starting point may be to look at the type of consumer related content portrayed on television.

Consumer Content on Television

Moschis and Churchill (1979) distinguish between two types of consumer related knowledge: direct and indirect skills. Direct skills are things that are functionally related to consumption actions such as budgeting abilities, pricing knowledge and attitudes toward specific advertising and marketing stimuli. Indirect skills, on the other hand, are cognitions or attitudes which are not directly useful in specific market transactions. These include materialistic attitudes and motivations for consumption.

What Moschis and Churchill have called direct skills are the rational and logical knowledge necessary for

successful consumer behavior. These are the types of skills which are generally assessed in consumer socialization studies. They are also the types of things which almost never appear in the media. Prices are hardly ever discussed in television programs and it is extremely rare to even see money physically change hands on television (Venus 1978). Not only does programming fail to provide this type of information, but even commercials are typically devoid of direct skill information. Resnick and Stern (1977) for example, found that less than half of all TV commercials contain even one specific piece of information about the product and only one percent contain as many as three informational points.

Rather than providing detailed knowledge, television is a medium of values and images. What television offers to consumer socialization is a picture of a world where wealth and consumption are both desirable and common (DeFleur 1964; Katzman 1972). Television also provides images of the context in which goods are used or possessed. One can determine whether a product connotes wealth or value based on who owns it and what other products or values are associated with it.

The underlying themes on television shows often revolve around opulence, hedonism and conspicuous consumption. Since 1970, prime time television programs which have dealt with consumption and extreme wealth have been enormously popular. DALLAS and DYNASTY, two of the highest rated shows in American television history, serve as excellent examples. These shows indicate that for something to be truly worthwhile, it must be prominently and lavishly displayed.

Daytime television, consisting mainly of game shows and soap operas, may present an even more hyperbolic American reality. As Atkin states:

In the realm of television entertainment, the most explicit consumer content occurs on game shows which feature substantial prizes of money and material goods. Contestants on these programs typically express exaltation as they win luxury automobiles, boats, jewels, trips, appliances, furs, and large sums of money, while the studio audience cheers appreciatively. It is possible that such avaricious displays may engender desires for the featured consumer goods or heighten materialistic orientations. (Atkin 1982, 199).

The American soap opera provides important consumption values. These programs are populated with upwardly mobile young people, wealthy professionals, and other social elites (Katzman 1972). Much of the action involves consumption and ritualized hedonistic behavior. A great many of these soap opera characters are either successful in a materialistic sense, or rapidly trying to achieve material success through whatever means necessary. Their pursuit of this end quite often provides the soap opera's storyline. Viewers are thereby provided with the lessons and symbols of a consumer culture in which this type of behavior is the norm, often rewarded, and even idealized.

Between the programs are commercials which exist for the purpose of stimulating consumption. In order to best do this, commercials not only point out the attributes of a product, they often dwell on their value expressive nature, and their status conferring qualities (Belk and Pollay 1985). They are not merely statements of information, they too are agents of socialization. They may, however, be far more effective at helping perpetuate a mass consumer culture, than effectively increasing demand for a specific brand.

The mass mediated portrayal of conspicuous consumption is not limited to television. The "good life" has long been portrayed in the content and advertising of different media. In print advertising, luxury themes and appeals have been common for at least the last seventy years and the trend is toward an increase in the depiction of and

appeals to materialism (Belk 1985; Belk and Pollay 1985). In the 1970's, for the first time this century, the dominant theme in print advertisements was one of luxury and pleasure rather than one of functionalism and practicality (Belk 1985). Friedman (1985) has found similar evidence of an increase in materialism in popular novels, plays and music. Even characters in the comics tend to reflect an overly prosperous and successful culture (Kassarjian 1984).

The False Construction of Social Reality

Each of us likes to think of himself as being rational and autonomous. Our ideas seem to be peculiarly our own. It is hard for us to realize how little of our information comes from direct experience with the physical environment, and how much of it comes only indirectly, from other people and the mass media. Our complex communication systems enable us to overcome the time and space limitations that confined our ancestors, but they leave us with a greater dependence on others for shaping our ideas about how things are in the world. While becoming aware of places and events far from the direct experience of our daily lives, we have given up much of our capacity to confirm what we think we know. (McLeod and Chaffee 1972, p. 50)

A very significant outcome of consumer socialization is the development of a mental construction of the marketplace and consumption values. These are shaped by a person's direct experience with the marketplace as well as through observation of both the real world and the world as portrayed on television and in other media. However, it was previously pointed out that much of the media's content shows a world that doesn't really exist. The net effect of this may be the development of a false construction of social reality.

The media's ability to distort heavy viewers' perception of the real world has been well established by media researchers investigating cultural indicators and the cultivation hypothesis (Gerbner et al. 1978; Hawkins and Pingree 1982). This research has shown that heavy viewers of television are more likely than lighter viewers to have incorrect beliefs about the real world which are biased in the direction of television portrayals. For example, it has been found that heavy viewers are most likely to overestimate their chances of being a victim of a crime (Gerbner et al. 1977); overestimate the stability of the nuclear family (Pingree et al. 1979); have greater faith in doctors (Volgy and Schwarz 1980); have more negative attitudes about the elderly (Gerbner et al 1980); and hold more sexist attitudes (Morgan 1980; Volgy and Schwarz 1980).

At least two studies support the belief that television viewing can lead to a false perception of consumption related reality. Fox and Philliber (1978), using a gross measure of television viewing, found a positive, although weak, association between it and overestimating affluence in the U.S. Similarly, a study of Israeli viewers of American television programs found that they overestimated the average weekly earning of Americans, and the percentage of households in the United States having items such as air conditioners, dishwashers, multiple cars, electric can openers and freezers (Weimann 1984). Furthermore, the heavier viewers overestimated to a greater extent than lighter viewers.

Once developed, an incorrect perception derived from television or films may be difficult to dislodge. O'Shaughnessy (1972), for example, found that even though Canadian children were taught accurate information of the plight of modern day Canadian Indians in grade school, most eight and nine year olds still believed that current day Indians wear little or no clothes, have feathered headbands, live in tents or tepees, and survive by killing people and stealing. One reason for this may be television's ability to show vivid images. It has been suggested that vivid mental images gained from the media

may play a disproportionately important role in information processing and decision making (Janis 1980; Tversky and Kahneman 1974). Therefore, incorrect perceptions of the world developed from visual media may be particularly important in determining future behaviors and exceptionally difficult to correct.

A number of possible effects may result from the development of a false perception of reality regarding consumer behaviors and values. From an individual level perspective, exposure to the media's version of consumption reality may ultimately effect specific product choices either by altering perceptions of direct consumer skills and knowledge or by means of stimulating viewer fantasies. Another possible result may be feelings of malaise or dissatisfaction due to mass-mediated social comparisons. Of course, these and other effects may be manifest at the societal level as well.

Media Effects on Purchase Decisions

Perceptions derived from the media can alter our decision making criteria for selecting products and brands. Critics have commonly claimed that advertising creates false impressions about what product attributes are important in purchase decisions. For example, automobile advertisements tend to stress attributes such as looks and comfort while ignoring equally or more important attributes such as safety and warranties. Repeatedly hearing some attributes stressed to the exclusion of others may, over time, perform an agenda setting function where frequently mentioned criteria become the most salient features in decision making.

The very process of decision making may also be effected by television content. Decision making skills may be learned from different socialization agents, but rarely will interpersonal sources demonstrate the internal process they go through in making a decision. The mass media are unique in their need and ability to express the internal states and considerations one goes through in making a decision, rather than just showing the overt behaviors associated with decision making. Therefore, viewers may gain insights about the decision making process by observing a media character going through a decision.

A content analysis of network programming indicated portrayals of decision processes were relatively common (Faber 1978). The portrayal of the decision making process was then compared to criteria associated with vigilant decision making practices (Janis and Mann 1977). Television decisions typically demonstrated good strategies with two major exceptions. First, televised decisions are made on the basis of a limited number of alternative solutions. Rarely were more than two alternatives considered. Secondly, television decisions appear to be resolved very rapidly; 25% were resolved immediately, 25% within a one day period, 40% within a week, and only 9% took longer than a week. Therefore, modeling the decision making process shown on television could lead to making overly hasty consumer decisions.

Purchase decisions may also be influenced by fantasies stimulated from media content. This may occur in two different ways. The first is through para-social interaction (Horton and Wohl 1956). According to this notion, people relate and respond to television characters as they would to their friends. Viewers don't just model what they see, but actively think about situations, evaluate behavioral strategies and broaden their tastes during viewing interactions.

Para-social interactions afford the viewer opportunities to interact with characters of the opposite sex, characters of higher and lower status than his own and with people of particular occupations and professions. It is likely that para-social interactions can lead to critical analysis of events and occurrences, and since they

involve no identity loss such interactions may well provide practice for everyday social roles ... and allow the viewer to take roles not yet experienced in real life. (Noble 1975, p. 39).

Thus, para-social interactions may provide viewers with a chance to experience and evaluate lifestyles different from their own. Knowledge of the tastes and values appropriate to higher social strata may help facilitate social mobility (Fox 1984). Alternatively, para-social interactions may work in the same way as real life reference groups do in influencing and reinforcing tastes to facilitate fitting in with existing social groups.

A second, and more extreme way in which the media may create consumer fantasy is through affecting our self image in buying situations. In buying situations where the object is particularly desired for its value expressive nature, our more "rational" self may be unusually influenced by a sort of mass-mediated preferred persona, or a synthesis of who we really are with who we would like to be. This idea is similar to the notion of "idealized self" (Belk 1985; Milgram 1976; Sontag 1973), but is premised more on images borrowed from the mass media than from interpersonal contact.

Another possible result of a false perception of consumption reality may be chronic unhappiness or malaise. When comparing their own lives to the world of television, the majority of people are bound to feel deprived. This social comparison may also spur a desire to have "what everyone else has." However, as people acquire more and more, they are likely to find that each new item is less and less satisfying. Brickman and Campbell (1971) call this the "hedonic trap." The life portrayed on television sets us up to believe that it is primarily through possessions that we find happiness. The more we buy the more we need and desire and the less we appreciate each new purchase. This creates the trap which leads ultimately to dissatisfaction and unhappiness.

Conclusion: Re-Examining the Media's Role

We have tried to show how previous research has only examined part of the possible outcomes of consumer socialization. Research based on the dominant theories used in consumer socialization has naturally centered on the goal-oriented skills needed to be a good consumer. While these skills are definitely important and deserve attention, focusing solely on these outcomes is likely to miss some of the potential power of the mass media, and limit our perspective of consumer socialization.

Research on media effects has shown that they are as likely to create dysfunctional effects as functional ones (Wright 1959). Therefore, it is important for consumer socialization to also consider these less desirable, but equally important, potential outcomes. While we have tried to point out some of these potential effects, a more thorough effort is needed. A possible starting point may be to conduct content analyses of the consumer related cognitions and behaviors presented in the media and especially television. This may suggest both important independent and dependent variables for investigation.

By changing our perspective to first consider the media environment in which people become socialized, we may be able to develop new models which can further our knowledge about consumer socialization. However, it is also likely that we will need to include antecedent and intervening variables in these new models. Current theories of media effects reflect either a belief in a transactional model or a new powerful effects notion which stresses long term perceptual effects (Severin and Tankard 1979). These theories stress the need to recognize audience differences in predicting media effects. Previous research in communication and consumer socialization suggest that these antecedent and intervening variables may include things such as interpersonal communication (Moschis and Moore 1982), consumption and viewing motivations (Ward and

Wackman 1971), and life situations (Faber, Brown, and McLeod 1979).

This is consistent with Klapper's (1960) metatheoretical perspective on media effects. Klapper argues that most often the media simply reinforce existing beliefs. One situation sufficient for a more powerful media outcome is, however, when there is an absence of mediating influences. Therefore, when parents, peers and other socialization agents are not exerting much direct influence, the media will be particularly important. This may be an important precept to remember in developing models to explain the relative role of different socialization agents in consumer socialization.

By stepping back from the current theories and the world views that drive them, and by focusing instead on the role television and other media play in comprising the individual's learning environment, we can hopefully expand our view of the consumer socialization process. The first step will be to develop sound models of the different ways (both functional and dysfunctional) that the media influence consumer learning. Then, perhaps, these models can be integrated into our larger theories and models as part of the environmental inputs in the consumer socialization process.

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LEARNING TO WANT THINGS

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An unprecedented and bold experiment in consumer behavior is presently being conducted with a billion consumers serving as subjects. It is the reintroduction of a consumption ethic into Chinese society. Under the policies of Deng Xiopeng's "market socialism," consumers are being allowed as well as encouraged to want things that would have been totally unthinkable at the time of Mao Zedong's death a decade ago.

Until the late 1970s China had followed a 30-year policy of income leveling, guaranteed work, subsidized necessities, and delay (if not renouncement) of consumption gratifications. A content analysis of the widely read official state newspapers, Liberation Army Daily and People's Daily found that self sacrifice and self abnegation were dominant themes during this period (Wang 1977). More specifically, the analysis revealed an emphasis on "selfless dedication and self sacrifice as well as a willingness to forego private material gain and personal comfort (Wang 1977, p. 46). Policies also forbid private ownership of land, businesses, houses, or automobiles. Travel outside of one's immediate area was largely forbidden. Property could not be inherited and consumer credit did not exist. The wealthy were decried as "capitalist roaders". Advertising was limited to banners carrying state slogans like the following:

NEVER FORGET CLASS STRUGGLE
DOWN WITH CAPITALIST ROADERS
CARRY THE REVOLUTION THROUGH TO THE END (Schell 1984).

In addition to these impediments to a consumer culture, China's 1979 per capita GNP of \$253 ranked 101st of 150 countries and territories in the world (Berney 1981).

But about 1979 the great experiment began. Agricultural communes were broken up in favor of individual initiative farming. The "iron rice bowl" of total job security began to crumble and monetary wage incentives began to be introduced. Policies began to change from "to each according to his needs" to "to each according to his work" (Lee 1986). Small scale free enterprise was established. The ownership of houses and automobiles was allowed and inheritance was reinstated. Advertising was begun in all media and the production and import of televisions was dramatically increased. Rather than being held up as "capitalist roaders", the wealthy were touted as virtuous successes. Incomes and income inequalities rose and by 1981, over 30 million Chinese were earning more than 8 times the national average income (Berney 1981). The austere banners and billboards of the preceding decades were replaced by markedly different slogans such as:

PEASANTS BEAM WITH JOY AS THEY GET RICH (Graham 1983)
TO GET RICH IS GLORIOUS
GET RICH BY WORKING
PROTECT THE INITIATIVE OF PEASANTS WHO BECOME WELL
OFF
HAVE NO FEAR OF BECOMING PROSPEROUS (Schell 1984).

Consumer Desires

Such changes have had a sudden and dramatic impact on Chinese consumers' material desires. During the time of the Cultural Revolution and Mao Zedong, the "three bigs" in Chinese consumption aspirations were a bicycle, wristwatch, and a manual sewing machine. However, by 1982 in urban areas of China there were 2.49 wristwatches, 1.47 bicycles, and .74 sewing machines for every household (Walder 1983). Furthermore, it has been estimated that half of all Chinese households now own at least one of these former "three bigs" (Weil 1982). As a result a new three bigs have been developed involving a refrigerator,

washing machine, and television set (Church 1986). Others have suggested a "new big six" that adds cassette recorders, electric fans, and motorcycles (Jones, et al. 1985) and the "Eight New Things" that changes television sets to color television sets and adds cameras and video recorders to the set of consumption aspirations (Reiss 1986). In relatively affluent Guangzhou, a recent survey found that 92% of households owned a television set (Stafford and Tong 1986). Another study of upscale Chinese executives found that over 75 percent owned wristwatches, radios, clocks, sewing machines, and bicycles and more than 30 percent owned cameras, electric fans, and tape recorders and used perfumes and cosmetics (Thorelli 1985). Even peasants have been found to want better bicycles, color television sets to replace black and white sets, and travel (Wen Hui Bao 1983). Clothing fashions are rapidly changing also as the so-called Mao jacket (actually popularized by Sun Yat-sen--Kronholz 1983, You 1983) disappears. Although an automobile is still out of the question for all but a few Chinese, the purchase of foreign cars and trucks has taken enough currency out of the economy that a two year ban on such purchases had to be enacted (Lin 1985). In addition, while they have suffered similar set backs in their joint venture with China recently (Lord 1986), American Motors (producing Jeeps in Beijing) is hoping that "people will get off their bicycles and get onto motorbikes. And then they will get into cars" (Jones, et al. 1985, p. 56).

What is happening in China is not so different from escalating consumption aspirations in other increasingly affluent societies.

For instance, after its industrial devastation in World War II, Japan began with a wish list (called the three sacred treasures after the legendary Japanese treasures of mirror, sword, and jewel) of television, washing machine, and refrigerator in the 1950s. By the 1960s this list had become a color television, car, and air conditioning (the "three Cs"; Fukutake 1974, 1982). And by the 1970s it was suggested that the Japanese consumer aspired to own a summer cottage, electric oven, and central heating (Cleaver 1976). If such escalating consumption aspirations can be generalized, the new big six and the eight new things may be only the beginning in China. This is all the more plausible given China's plans to emerge from the third world and follow the prosperous path of Asian neighbors South Korea, Taiwan, Hong Kong, and Singapore (Mann 1986).

Taiwan in fact is an interesting point of comparison. Per capita income in China is now approximately what it was in Taiwan during a 1969 survey of consumer durables ownership and aspirations there (Freedman 1972). At that time the average Taiwan household ownership of watches, bicycles, sewing machines, televisions, refrigerators, and washing machines was lower than that of China today in each case. Contemporary Chinese consumption aspirations and purchasing plans are also more ambitious than the 1969 Taiwanese. Direct comparisons are difficult because of decreased costs for some items like televisions and Chinese subsidization of a number of basic living costs. But at least superficially it appears that (incredibly) communist China may be becoming at least as materialistic as capitalist Taiwan. One incentive to do so may be relative comparisons with surrounding nations. In 1969 Taiwanese consumers were relatively well off compared to Chinese consumers. Present PRC Chinese consumers feel relatively deprived compared Chinese in Hong Kong and Taiwan. Those PRC Chinese near Hong Kong or with relatives in Hong Kong, Taiwan, or the west have known of these differences in consumption levels for some time. But comparisons are now more striking for all of China. One cause is increased exposure to foreign television,

film, and advertising (Keyfitz 1982, O'Guinn, Lee, and Faber 1986). With increased travel in and out of China, more Chinese have seen other nations or at least have seen the consumption by tourists from other nations (Boulton 1979, Pringle 1985). Modern local hotels and other facilities springing up to cater to foreign tourists in China are another source that highlights differences in consumption levels, and the Great Wall Hotel in Beijing must now keep out curious locals. Even without direct access to tourist facilities, consumption aspirations are affected by such symbols that "create dreams by their visible presence, as well as through those Chinese who visit and work there" (Schell 1984, p. 133).

In addition to comparisons to other nations, there is increasing room for relative comparisons of consumption standards within China. With increasing income disparity in China (Deng Xiopeng--Selected Works 1983--says it is alright "to make some people rich first, so as to lead all the people to wealth"), there are increasing evidences of "the red eye disease" (envy) in China. This has led in some cases to poorer peasants attacking or sabotaging their better off neighbors (Jones, et al. 1984). But according to some, in addition to such anti-social acts, envy is also believed to potentially spur attempts to catch up through work and consumption (Sabini and Silver 1982).

There are other spurs to consumer desires in China as well. Demographically China is undergoing its third baby boom since 1949 (Qian 1983). Twenty-five percent of the Chinese population (born in the 1950s and 1960s) is in its child bearing years at a time when government policy mandates only a single child per family (Ren and Yue 1983). Also reducing family size is increased geographic mobility which results in fewer extended families living together. With only one child to support, families have more to spend on children. This has frequently resulted in competitive pampering of children with material goods among neighboring families (China Reconstructs, 1983). There is also growth in the increasingly leisure-oriented retired segment of the population (Statistical Bureau of the People's Republic of China 1982, Beijing Review 1983). And a sharp increase in two-worker households since the cultural revolution is also adding additional consumption power for the Chinese (Chen and Taylor 1982). At the same time, the Chinese have increased the priority of consumer goods production by emphasizing the modernization of so-called light industry even over heavy industry. Increased income, a growing economy, and more and better consumer goods all combine to fuel consumer desire in China. Scarcities remain the major barrier to consumption in many cases and have caused an increase in consumer savings despite increases in consumer desires (People's Daily 1983, 1984).

World Class Wants

In the 1950s Riesman and Rosenborough (1955) described a "standard package" of goods that then constituted a uniquely American set of consumption aspirations. More recently it has been suggested that there has emerged a world-wide standard package that consists of "a home, automobile, and the means to do some traveling; within the house must be electric lighting, a refrigerator, and a television set" (Keyfitz 1982, p. 661). For each of these items with the exception of automobiles, there has been rapid expansion into the Chinese economy in the 1980s. It appears clear that China is adopting a world class set of consumer wants. Because it has developed these wants so rapidly and against such a dramatic contrast to the austerity of the cultural revolution, the questions that seldom get asked when development of consumption proceeds more slowly are being raised as the eyes of the Chinese and the world focus on the grand experiment taking place there.

Materialism

One such question concerns the impact of the changes taking place in China in what might be called consumer

culture at a societal level or materialism at an individual level. The issue of what impact increased consumption will have on Chinese well-being is potentially moderated by the effects of increased consumption on health on one hand and materialism on the other hand. Boulding (1985) finds that there is a positive relationship between per capita income and health (longevity) until about \$2000; after that there is virtually no effect. By this criterion, Chinese consumers can benefit substantially from further increases in income and consumption. However, psychological well-being is another matter that must be considered in light of studies suggesting that higher materialism is associated with lower feelings of happiness and well-being (Belk 1985).

There are many evidences of materialism (heightened emphasis on material goods as a supposed source of satisfaction and dissatisfaction in life) in China since Mao (Gelb 1985). The desire for individualism appears to be increasing (Nevis 1983). Despite, or perhaps because of, shortages of many goods, preference for high status brands, especially foreign brands, is high (Wortzel 1983). In addition there is interest in owning certain types of products because of the social status they convey. These include televisions (Rohter 1982), household help (Schell 1984), motorcycles, fashionable clothing, cosmetics, perfumes (Gladstone), hot running water, inside toilets (Mann 1986), and gold jewelry (Kronholz 1983). Other evidences include the counterfeiting of popular bicycle brands (Weil 1982) and a recent fad of wearing imported sunglasses with the label tags still attached (Curry 1981). Property crimes are also taken to be a reflection of the increasingly materialistic atmosphere in modern China (Kelly 1986). Such materialism is all the more striking in a country that for the past 30 years before 1979 had pursued classlessness and which grew out of the sort of class struggle called for by Karl Marx.

This irony has not gone unnoticed by the Chinese people. One result has been skepticism about the permanence of the consumer culture beginning to appear in the country. The wealthy farmers who were to be feted at a banquet celebrating those earning 10,000 yuan (about \$3125) per year, were reluctant to attend because they feared they were being singled out for criticism (Schell 1984). Similarly, some of the new wealthy are joining the communist party, not because it commands the respect it once did, but because it seems to be a hedge against the fear that property may be confiscated again in the future (Schell 1984). These fears seem increasingly remote, but are not entirely without basis. During 1982 and 1983 there was a temporary reversion to less capitalistic policies in an attempt to rid China of the "spiritual pollution" of capitalism. Laws were passed banning advertising of foreign cigarettes and liquor, as well as sexiness in advertising, and frivolous or luxurious products of the West (Anderson 1983). Citizens in Guangdong province were ordered to take down television antennas capable of pulling in signals from nearby Hong Kong and were warned against the "decadence and 'moral bankruptcy' of the capitalist West" (Curry 1982). Wage incentives were temporarily abandoned in favor of the "spiritual incentives" of the cultural revolution (Walder 1983).

While such reverses were short-lived, they reflect some ambivalent feelings toward materialism by the Chinese. One article in Zhongguo Shehui Kexue (1981) indicated concern that China was headed toward a culture of two-car families like the United States. The Chinese minister of culture spoke out in Renmin Ribao (1983) against "performances that propagandized for violent things that were depraved and sexual in nature, and in stinking bourgeois life-styles dedicated to nothing more than having a good time, drinking, resting, and hedonism" (quoted in Schell 1984, p. 172). A clerk in China worried about her children: "They want to buy more things than we can afford. This is not good. In the past, everyone knew that we were poor. Now there is the illusion that we are rich. But we aren't" (Burstein 1981). And a 1980 Beijing Review cover story somewhat wishfully concluded:

Obviously people here have not yet begun to go in for consumption and wasteful habits, chase after money or worship possessions. This is a thing we are happy about because a "consumer society" is not necessarily a society which brings people happiness. What many a Chinese wishes to see is a comfortably off, yet simple and honest society (Beijing Review, 1980, quoted in Anderson 1984).

The Marketing Concept and Consumer Wants

As was found to be true in Nigeria (Mitchell 1984), the seller's market conditions in modern China do not preclude allegiance to the marketing concept of designing offerings to meet consumer desires. As one provincial vice governor said, "The purpose of socialist production is to meet the needs of the people" (Liu 1982). Both marketing research and the decentralization and deregulation of the Chinese market place are designed to help make this happen. And state businesses that fail to produce marketable products are now being shut down for the first time (Chin 1986). Most Western scholars of marketing would applaud such actions evidencing an interest in applying the marketing concept to serving consumer wants and needs. However, at least three major objections may be raised concerning the use of this concept, either in China or elsewhere.

One problem noted by Hirschman (1983) is that the marketing concept may stifle creative innovation and artistry. Relying on what consumers say they want is dangerous in art and in other areas of consumption involving innovation and creativity. Consumers generally lack the knowledge of technical feasibility possessed by engineers and architects and the artistic vision of artists and designers. Furthermore, to rely on consumer desires alone in such cases is to remove from these specialists the application of their unique talents to create. It is dreadful to contemplate the art that would replace the Picasso statue in Chicago's Daly Plaza if the design had been based upon a survey of consumer desires.

A second problem with the marketing concept is that it assumes that consumers know what they want and can and will communicate these desires. This is often incorrect. In the case of fashion goods, ACR fellow Bill Wells once asked if a man could have foretold his use of the hairdryer before other men began to adopt it or whether a woman could have forecast her skirt length for the coming year before seeing what was in fashion. Even when consumers know what they want, they may be unable or unwilling to communicate this information. Those who can and will communicate their desires, say for a new motion picture, may not be representative of those who can't or won't do so.

A third, and perhaps more devastating, problem with the marketing concept is that it assumes that what consumers want is good for them. If we really believed this to be true we would have to face an open market for heroin, machine guns, and slavery, a negligible market for parks, safe vehicles, and non-polluting factories, and a chaotic market resulting from the optional provision of fire protection, police services, and a military. While no society is willing to subscribe to such consequences, they would follow from total adherence to the marketing concept. Surely the marketing concept has some positive consequences for both consumers and society. The question is where to draw the line.

Conclusion

It is clear that consumer wants are growing rapidly in the People's Republic of China, and that because of this unprecedented event, China represents the greatest experiment in consumer behavior to ever be conducted. This paper has attempted to document some of the changes taking place and the issues that these changes involve. Growing materialism is one such issue. The underlying question is whether some of the disfunctions of increased materialism will cancel the benefits to be achieved from an enhanced standard of living for the Chinese. The other

major issue raised is how much adherence to the marketing concept is desirable in China. The PRC is now struggling with decisions about whether to allow increased pornography from Hong Kong, Marshall arts movies from Japan, popular music from Taiwan, and fashions from the U.S.. Adherence to the marketing concept would suggest allowing such goods, but attempting to provide people with what is good for them may suggest the prohibition or restriction of at least some of these goods. As the discussion above indicates, the Chinese are certainly aware of such issues. There are also economic factors involved concerning balance of payments, rate of savings, and inflation. But the basic consumer question involved is what will increase consumer well being. It will be extremely interesting to examine the decisions that emerge and their effects. Still in terms of learning to want things, the effects of the decisions already made may be irreversible. The government slogan "Look Forward" is now translated by many to mean "Look for Money".

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Abstract

The effects of emotions in consumer behavior are mainly discussed as attitudes-towards-the-ad/or stimulus (Aad). This study is to show that Aad contains a dynamic affective component. Thus Aad will be a mixture of emotional state at the beginning of the exposure and modulated instantaneous emotions during exposure. In addition, a direct effect of Aad on intention to buy could be found.

Introduction

Much of the previous research in advertising and communication effects has concentrated on "controlled" verbal processes. The cognitive structure approach, which emphasizes the beliefs about a stimulus that are formed or changed after exposure, explains between 15% to 30% of the variance in attitudes (e.g., Ryan and Bonfield, 1980). By controlling for measurement error up to 50% can be achieved (Bagozzi, 1982).

In addition, much of the cognitive response approach has concentrated on "verbal" processing that occurs during exposure to a stimulus. In this approach, protocols are collected at least immediately after exposure (e.g. Wright, 1981; Batra and Ray, 1983). This kind of process measurement more adequately accesses the dynamic component of consumers' processing of a message. By collecting data during stimulus exposure, the on-going attitude and intention-formation process becomes transparent.

It is estimated, that the analysis of verbal processes can explain up to 70% of the variance in attitudes or (purchase) intention (Mitchell, 1983, p. 28). The remaining 30% of the variance may be accounted by emotional behavior and worth a closer look which is the goal of this paper.

Attitude-towards-the-stimulus or more specific attitude towards-the-ad (Aad) is seen as a predominant construct to analyze consumers' emotion. Aad is considered as a mediator of advertising's effects on brand attitudes and purchase intentions (e.g. Mitchell and Olson 1981; Lutz, 1985).

In general, three central ways of studying consumers' emotions can be distinguished:

- The category approach which postulates a set of basic or primary emotion categories like: joy, anger, sadness, fear, acceptance (Izard, 1977; Plutchik, 1980).
- Dimension theorists who formulate a small set of (independent) dimensions that best describe the differences in emotional behavior (Mehrabian and Russel, 1974). This approach provides verbal measures of pleasure, activation (arousal), and, with less consistency, the amount of dominance elicited by a stimulus. The pleasantness dimension has been shown to be highly correlated with the evaluation factor of the semantic differential (Ward and Russell, 1981; see also Neibecker 1984; 1986).
- Also recent cognitive response research has concentrated on the emotional component in verbal protocols (Batra and Ray, 1985). Coding of affective elements in cognitive responses seems to be another promising way to analyze consumers' emotions.

Whereas, there are signs to believe, that strongly verbal oriented approaches in detecting emotions remains captured in the information processing tradition (Derbaix and Abeele, 1985; Kroeber-Riel 1984). Emotion psychology as well as research on hemispheric specialization gained theoretical insights, which draw our attention to the speci-

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fic processing schema of our visual and emotional channel (Zajonc, 1980; Tucker, 1981; Lazarus, 1982; Bryden and Ley, 1983).

Of course, the crucial and specific question of the debate, whether the original affective reactions themselves must also contain cognitive components cannot be answered empirically given the current state of knowledge and research technology (Zajonc and Markus, 1982). However, significant proportions of emotional reactions, even if cognitive mediation should be necessary, rely on nonverbal channels and are difficult to verbalize (i.e. Ekman and Friesen, 1969; Buck, Baron and Barrette, 1982). And a posteriori questions about the reasons for an affective evaluation may be often yield justifications rather than substantial explanations.

As part of the distinction between automatic and controlled processes, Derbaix and Abeele (1985, p. 160) pointed out, not to equate controlled process with cognition only and automatic processes with emotion or action habits only. There can also be cognitive automatism, as in schemata or controlled emotions, as for example in the voluntary facial expression. As a consequence, the autonomic-controlled distinction should not be considered as absolute. So nowadays, there is a clear tendency to integrate both viewpoints and theorists try to consider both, cognitive and emotional processes, including global behavior such as motor components of affect (Bower, 1981; Clynes, 1980; Leventhal, 1982).

Further indications for the relevance of the Aad-construct are found in persuasion research where two basic routes are posited: one, called the central route, says that attitude change results from a person's careful consideration of information. Here message content is the primary influence. However, people are not always motivated to think about the information to which they are exposed, yet attitudes may change nonetheless. Attitude change that occurs via this second or peripheral route does not occur because the person has diligently considered the pros and cons of the issue. In this case, the persons are affected more by the source of the message or contextual factors than by actual message content (Petty and Cacioppo, 1984).

Attitudes Towards the Stimulus: A Dynamic Perspective

At the present stage, Aad is conceptualized as a rather complex construct. Credibility, attitude towards the advertiser, attitude towards advertising and finally emotion (mood) are considered as relevant components of Aad (Lutz, 1985). The study focuses upon the emotional effects, perhaps the most relevant factor in Aad.

Related terms for emotion found in Aad-literature are "warmth" and "mood or-feeling state" (e.g. Holbrook and O'Shaughnessy 1984). Warmth is defined as "a positive, mild, volatile emotion involving physiological arousal and precipitated by experiencing directly or vicariously a love, family or friendship relationship" (Aaker, Stayman and Hagerty, 1986). Here a single, but complex emotional state is described, which may be characterized by a high degree of pleasantness combined with a medium arousal level. Mood on the other side, has been defined as the consumer's affective state at the time of exposure to the stimulus and some kind of affect transfer from mood on Aad is assumed (Lutz, 1985). Other researchers describe the purpose of the advertisement as to create a favorable Aad by leaving the viewer in a positive emotional state after processing the ad (Hill and Mazis, 1986).

Most of the traditional definitions share a static view to the emotional component in Aad. On the other side,

Izard (1977, p. 5) defines emotional state as a particular emotional process of limited duration, which may last from seconds to hours. For TV-spots, pop-music and other dynamic stimuli of about 15 seconds or longer, the emotional state at the beginning of exposure may be modulated during exposure and even different emotions may be induced by the stimulus.

In analogy to the recently outlined conceptualization of low involvement as a situation-specific state variable, a dynamic conceptualization for Aad is suggested (Gardner et al., 1985). This process-oriented view supplements the conventional Aad-construct. Thus Aad will be a mixture of emotional state at the beginning of the exposure, modulated instantaneous emotions during exposure, individual differences etc.

As a further support for the "dynamic view" of Aad, it has been found that short-run affective states can be induced by emotionally laden slides, films or everyday success conditions (e.g. Isen and Shalke 1982; Kroeber-Riel 1979; Buck 1982; Zuckerman et al. 1981). Therefore, in this study Aad is not considered to depend on the actual long-lasting emotional state only, but also is expected to be modulated in the short-run by the emotional content of the stimulus itself.

Up to now it remains to be shown that the dynamic component in Aad is able to explain a significant portion of the variance. Thus, the present study attempts to demonstrate that techniques designed to measure momentary emotions can add an additional amount of explained variance to the Aad-construct.

Method

Program Analyzer

To operationalize the construct "instantaneous emotion," like/dislike responses (affective pleasantness) were gathered throughout stimulus presentation, using the program-analyzer. Related methods are discussed as "warmth monitor" (Aaker, Stayman and Hagerty, 1986) and "dialing procedure" (Friestad and Thorson, 1986). The program analyzer (PA), allows one to record reactions to an on-going program and was first devised by Paul F. Lazarsfeld and Frank Stanton in 1937 (Peterman, 1940; Brockhaus and Irwin, 1958; Levy, 1982; Neibecker, 1985). The subject operates it with two buttons, in our study a red button in the right hand and a grey one in the left hand. The instructions for the subjects were as follows:

We should like you to indicate whether you like or dislike these songs while you are listening to them. If, during any part of the program, you feel that you like what you are listening to, please press the button in your right hand. If you dislike what you are listening to, press the button in your left hand. If any parts leave you indifferent, just do not press either button.

In addition to this instruction, two "mnemonic" sheets were placed in front of the subjects showing two figures: on the left side with the label "dislike" and a sad face, and on the right side with the label "like" and a smiling face. Since the appearance of the original Lazarsfeld-Stanton program analyzer, other audience-response recorders have been devised. For our study, a computer-assisted facility is used with on-line data recording.

Study Specification

The experimental data reported herein were collected in the Laboratory of the Institute for Consumer and Behavioral Research (University of the Saarland, FRG). First the subjects were asked to evaluate two German popmusic songs using program analyzer. In addition other songs were presented but are not considered in this paper. After passing this step, a paper-and-pencil session followed with affective (attitude) measures and a constant sum scale used as a purchase intention measure (for details, see Figure 1). The semantic differential attitude scales

were bipolar seven-point rating scales and the Aad-scales were constructed with unipolar itemized rating scales with seven points.

Instead of advertisements, popmusic songs were used in this study. Analogous to the Aad literature, attitudes towards the songs were measured. Consequently it would be more correct to talk about attitude-towards-the-stimulus - but to avoid the introduction of a new term, we talk about Aad throughout this paper.

A total of 130 subjects was chosen from the main target population for these kind of songs and was placed at our disposal by one of the performers. Therefore, all subjects were females from 12 to 64 years old. They were recruited by an advertisement in a local newspaper. A gift was given to every respondent for participating in the study.

Stimuli were two new German pop songs interpreted by well-known performers comparable to Barry Manilow or Neil Diamond, and not yet released when the experiment was started.

Songs	Performer	Duration	Beats /min.
SI: Sie glaubt an ihn	H. Carpendale	206 sec.	80
SII: Und dafür dankeschön	C. Roberts	226 sec.	118

Figure 1: Description of Measures

***** * Song I (Howard CARPENDALE) ******		
Construct	Variable	Description
Pleasantness (PL)	Y ₁	Global semantic differential (SD) (Multi-item score: fresh-stale/strong-weak/good-bad/full-empty)
	Y ₂	Concept-specific SD (Multi-item score: deep-shallow/meaningful-meaningless)
	Y ₃	Global itemized rating (Multi-Item Index: is appealing/is fun to hear/is pleasant)
	Y ₄	Concept-specific itemized rating (Multi-item score: is credible/is convincing)
Instantaneous pleasantness (IP)	Y ₅	Element E 5 (refrain)
	Y ₆	Element E 2 (refrain)
	Y ₇	Element E 1 (verse)
Performer attitude	Y ₈	How much do you like the performer? 7-point rating scale
Purchase intention	Y ₉	Constant sum scale
Familiarity	X ₁	Do you know the performer?
	X ₂	Recall of the name
***** * Song II (Chris ROBERTS) ******		
Pleasantness (PL)	Y ₁ -Y ₄	See Song I
Instantaneous pleasantness (IP)	Y ₅	Element E 9 (refrain)
	Y ₆	Element E 13 (refrain)
	Y ₇	Element E 11 (verse)
Performer attitude	Y ₈	See Song I
Purchase intention	Y ₉	See Song I
Familiarity	X ₁ -X ₂	See Song I

Analysis Method

A structural equation modeling method (LISREL) is used to represent the constructs and test the hypothesis that instantaneous emotions are a relevant subcomponent of the Aad-construct. To model the dynamic component, Aad is postulated as a molecular structural construct. This follows the distinctive view of Bagozzi (1985) to differentiate between molar (global) and molecular (micro representation) level of abstraction. The proposed model (see Fig. 2) employs higher-order latent variables within the context of simultaneous equation systems. Thus Aad is modeled as a latent variable which has no direct measures but rather achieve meaning through their connection to lower-order latent variables which do have direct measures. A static and a dynamic pleasantness subdimension represent the complex Aad-construct.

Furthermore the effect of Aad on performers' attitudes and purchase intention are considered. In addition, the effects of familiarity on attitudes and intention are modeled (cr. Batra and Ray, 1985; Moore and Hutchinson, 1985).

For analysis performed at the level of individual respondents, responses on the program analyzer were calculated as a like/dislike index for every part of the songs representing a subtracted linear combination of the reaction scores for like, neutral, and dislike (e.g. Nunnally, 1978, p. 152). After correcting for extreme-response tendency, the "normalized values" do not deviate much from normality, a notable fact for further calculations (typical skewness about -0.3 to 0.4, typical kurtosis in the range of -0.9 to 0.1).

Figure 2: Dynamic Component Model

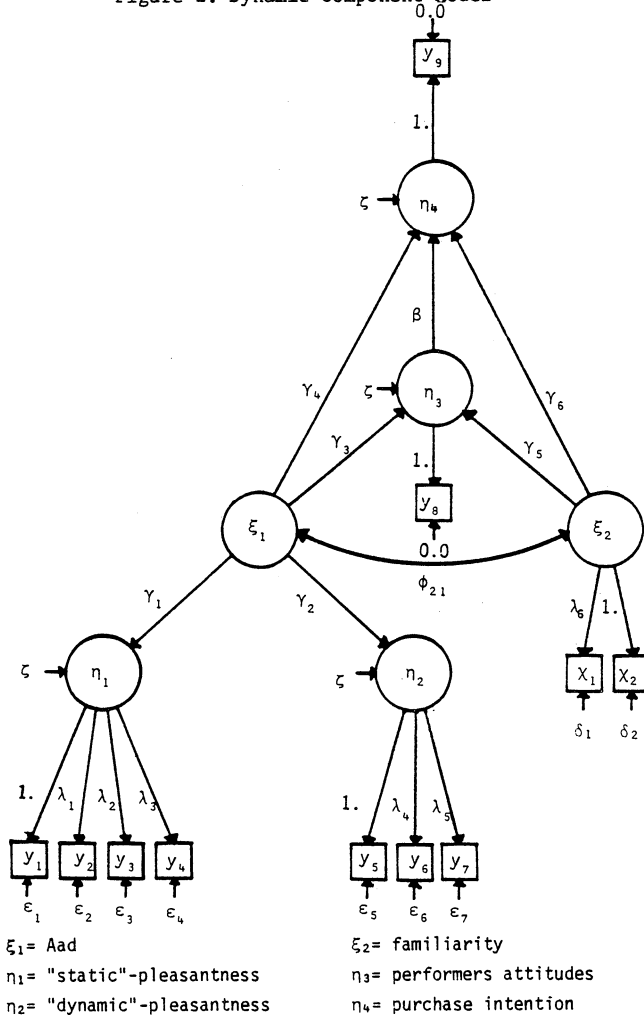
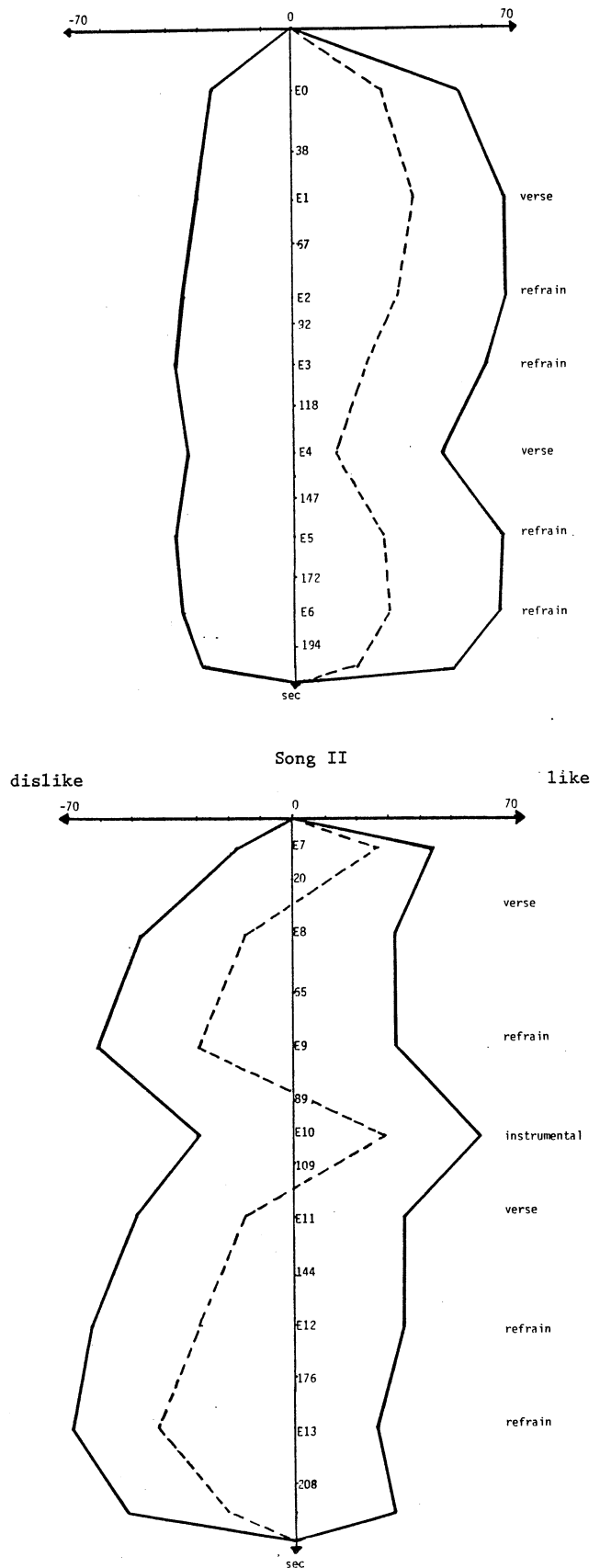


Figure 3: Reaction Profiles for Song I



--- = net values (like minus dislike)

Results

In early research as well as in actual commercial and non-commercial research studies, the usual way to analyze data of the program analyzer is restricted to descriptive statistical procedures (Peterman, 1940; Brockhaus and Irwin, 1958; Mielke and Chen, 1980). It is common practice to give the so-called "reaction profile" an aggregated score over all subjects for every second. In market research practice, the aggregated scores of reaction profiles are compared with the results from past experience and conclusions as above or below average are drawn.

Table 1: Parameter Estimates

Parameter	Song			
	I		II	
*	1.00 (---)	.83	1.00 (---)	.92
λ_1	.87 (.08)	.72	.89 (.08)	.82
λ_2	1.04 (.09)	.87	.86 (.08)	.79
λ_3	.99 (.09)	.83	.80 (.08)	.74
*	1.00 (---)	.88	1.00 (---)	.82
λ_4	.79 (.11)	.70	.85 (.14)	.69
λ_5	.86 (.11)	.76	.76 (.14)	.62
λ_6	.92 (.09)	.92	1.03 (.09)	1.03
*	1.00 (---)	1.00	1.00 (---)	1.00
γ_1	.83 (.08)	1.00	.92 (.07)	1.00
γ_2	.35 (.09)	.40	.34 (.09)	.41
γ_3	.70 (.08)	.70	.66 (.08)	.66
γ_4	.42 (.12)	.42	.67 (.12)	.67
γ_5	.00 (.07)	.00	-.17 (.07)	-.17
γ_6	.19 (.08)	.19	-.12 (.08)	-.12
β	.14 (.11)	.14	-.25 (.12)	-.25
ψ_{11}	.00 (*)	.00	.00 (*)	.00
ψ_{22}	.65 (.13)	.84	.56 (.13)	.83
ψ_{33}	.51 (.07)	.51	.53 (.07)	.52
ψ_{44}	.66 (.09)	.66	.71 (.10)	.71
ψ_{21}	.19 (.09)	.19	-.05 (.10)	-.05
	$\epsilon_{21} = .12$		$\epsilon_{51} = .10$	
p(df)	p(39)=0.18		p(39)=0.79	
Chi ²	47.06		31.77	
GFI	0.94		0.96	

* = constrained parameter; Standard Errors in Parentheses; Standardized Solution in Third Column

In this research, we are going one step further, looking for correspondence between variables on the individual person level of analysis. To achieve representative scores, the different parts of the songs are divided into refrain, verse, and instrumental segments. In the more tender songs, as used here, instrumental segments are rare and verse and refrain dominate. This procedure differs from earlier research with musical stimuli, in which electronically generated sound sequences and/or music such as Waltzes, Tangos, Jazz, etc. have been mainly used (Gabrielsson, 1973; Crozier, 1974).

For our songs, the over-all reactions to single segments indicate that the greatest acceptance for pop-songs is achieved if primarily the refrains and secondly the verses are liked. For SI, 68 subjects (54%) liked the refrains. Compared with SII, the songs with the lower purchase intention, especially the refrains and verses are noticeably disliked. Only the instrumental part of SII, a segment without performer specific potential and no singing etc., found agreement (Figure 3).

However, our central question remains open: can these like/dislike scores explain a significant portion of the variance in Aad? To discuss this question first let us

consider the results for the model estimation (Table 1).

At first, the model as a whole is not disconfirmed by the data and can be "accepted." Chi² values as well as the goodness of fit index (GFI) confirm the adequate fit of the model for both songs with p-values greater 0.10 or GFI values of at least 0.94. The model thus shows that Aad can be represented as a multidimensional molecular construct. In this respect the two subdimensions - "static component" and "dynamic component" - are of particular interest. By "static" is meant that the traditional measurement procedures are circumscribed - i.e. they are measured about ten minutes after hearing the songs. The "dynamic" subdimension is operationalized by instantaneous like/dislike reactions during exposure to the program. The resulting parameter estimates for the static component are quite high and significant (see γ_1) with value ranging from 0.83 and 0.92, for SI and SII, respectively.

Second, as hypothesized, the parameter estimates for the dynamic component are relatively high and significant, with values of 0.35 and 0.34. To test if this contribution to the variance in Aad is of relevance, an alternative model is assumed which postulates a zero influence. These two restricted models yield in Chi² - differences of 14.9 for SI (1 df) and 15.0 for SII (1 df). The loss in explanatory power for these restricted models is significant at the 0.0005 level. Thus, our hypothesis is strongly supported, and the dynamic component adds a significant portion to the variance in Aad.

As a further result, a performers' familiarity and Aad seem not to be strongly interrelated for popmusic songs. Only for SI does a marginal intercorrelation exist between Aad and performers' familiarity. On the other side, familiarity (knowing the performer) has a positive effect on purchase intention for SI and a negative effect for SII. The former reflects high and the latter low popularity for the respective performers.

These findings can be interpreted as a result of the situation of the performer of SII who changed his style in a time period of low popularity. A 3-way classification for Aad, attitudes towards performer and familiarity clarifies the situation. If Aad is negative, the familiarity with the performer has no significant effect on attitudes toward performer. But, if Aad is positive, familiarity with the performer becomes a central variable. Surprisingly 85% of the subjects with positive Aad and without knowing the performer also have a positive attitude towards the performer. On the other side, 54% of the respondents indicating a positive Aad but knowing the performer (which means high familiarity) expressed a weak attitude towards the performer. They liked the new song spontaneously, but recalled the name of the performer during the questionnaire procedure and become aware of the actual low popularity of this performer - resulting in a subsequent bad evaluation.

Further, Aad has a highly significant direct effect on performers' attitudes and on purchase intention for both songs. And surprisingly enough, the direct effect of attitudes toward performers on purchase intention is low for both songs and lower than the direct effect of Aad on intention to buy.

Conclusions

Aad is considered as a mediating construct to explain stimulus effects on attitudes, intentions, and preferences. Past research was concentrated on analyzing final Aad-states measures some minutes or longer after stimulus exposure. Analogous to persuasion research, where process measures like cognitive responses are used to analyze verbal processes that occur during stimulus exposure, a related process measure is used to analyze emotional processes that occur during exposure - without

the necessity of a verbal translation.

The typical like/dislike reactions using the program-analyzer are interpreted as (dynamic) pleasantness responses. The possibility to analyze homogeneous subparts of the stimuli enables a detailed control which emotional-state is induced by which part of the stimulus. Thus, by elimination of irritating and disliked scenes, the overall acceptance of a stimulus can be improved.

The dynamic component in the Aad-construct, as outlined in this paper, could be shown to explain a significant portion of the variance in Aad. Thus, affective processes should gain our attention, when analyzing consumer's behavior.

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STATUS RECOGNITION IN THE 1980S: INVIDIOUS DISTINCTION REVISITED

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Abstract

Scholars in the 1970s suggested that Americans had lowered their desires to express social status through ownership of material items. Yet, the social environment of the 1980s seems more receptive to marketing strategies with status orientations. Using retail institutions, the same stimulus objects of a 1970s study, this investigation suggests that status recognition in the consumption environment has advanced considerably. As in the case of other abstract social judgments, interjudge agreement remains high regardless of the age or occupational status of raters. Differences in consensus, however, are found for different income and education groups.

The Use of Symbols to Convey Status

As originally envisioned by Weber (1946), status is the degree of social honor, respect, or prestige awarded to an individual by others. Performance of a social role is the firmest basis for making status judgments. This fact is supported by a large body of sociological research showing that status evaluations of occupational titles are extremely homogeneous among members of different cultures (Trieman 1977) and subcultures (Alexander 1972). Based on occupational titles alone, members of society evaluate an individual's status with considerable agreement. Within small communities where residents are familiar with nearly everyone, status evaluations are relatively easy to make. However, today the majority of the population lives in large metropolitan areas, lessening the probability of meeting an acquaintance outside of some common social structure (e.g., work, church, neighborhood meeting). Unless a deference entitlement (e.g., occupational title, educational level) enters into the social interaction between any two unacquainted individuals, an evaluation of prestige or status is dependent on visual cues (Eisenstadt 1968). Since the turn of the century observers of society have argued that members of the modern community have been more or less forced into reliance on the correct display of material items, rather than reputation, in order to convey status (Goffman 1951; Form and Stone 1957; Simmel 1904).

Belk et al. (1982a; 1982b) note that the ability of symbols to communicate status is a result of encoding and decoding. Encoding of a status level is achieved by ownership of symbols which presumably are unique to that level. For example, advertisements for Piaget watches or Mercedes Benz automobiles appeal to the use of symbols to encode status. Their ability to communicate that status rests on the extent to which these products are confined only to upper social classes. Symbols which become diffused across levels of the class hierarchy are what Goffman (1951) terms "fraudulent," meaning that members of society can no longer be assured that ownership of these symbols deserves a certain level of status. Symbols found as relatively homogeneous within class levels include furniture, clothing, and housing (Porter 1966; Schaninger 1981).

Accurate communication of status also depends on most members of society perceiving a symbol to represent an approximately similar level of status (status decoding). In other words, if the majority of individuals do not make similar status attributions from a symbol, its effectiveness in communicating status is diminished. Homogeneity or agreement of status symbolism has been substantiated for various product categories including clothing (Douty 1963), health care (Munsen and Spivey 1981), automobiles and housing (Belk et al. 1982a; 1982b).

In sum, the various positions an individual occupies are the clearest source of his or her prestige. These positions, however, rarely facilitate status communication in

the urban environment. If ownership of material items is homogeneous within class positions (status encoding), and society agrees as to the deference entitlement (status decoding), symbolization is achieved. This investigation examines the strength or homogeneity of status recognition (decoding). As Coleman (1983) noted in his review of the significance of social class, however, disaffection from status encoding took place during the 1970s. Several social trends underlying this disaffection suggest that homogeneity of status decoding may not be of a high level.

The Decline of the Material Status Symbol

Blumberg (1974) proposes that status is dependent on an item being both socially desirable and scarce. For example, dumping grounds for nuclear wastes are scarce but not socially desirable and do not lend status to their geographical locations. A Picasso, conversely, does say something about the status of its owner since it is both unique and socially desirable. Two arguments suggest material items may no longer effectively communicate status.

Rising Affluence

This argument, the most prevalent, claims that everything from dish washers to automobiles are no longer scarce because of technological advances and rising disposable incomes. Proponents of this view argue that only such items as housing, yachts, stables, and private jet aircraft retain their ability to communicate status (Blumberg 1974).

Change in Consumer Attitudes

A shift in the sentiments of some Americans away from materialism and toward simplicity and self-reliance is a trend directly opposite to that of expressing distinction with material items. One example of this shift in values has been labelled voluntary simplicity (Shama 1981), which manifests itself in behaviors such as growing vegetables and commuting on bicycles. Viewed from the perspective of consumer encoding, this lifestyle represents a trade-off of status sought from materialism, for self-esteem and status based on self-relying performances.

At an estimated eight million people (Shama 1981), the number of voluntary simplifiers is a small proportion of Americans. Yet, it is a smaller representation of a larger social trend which grew from the turbulent 1960s. During this period racial equality and antiwar movements appeared to cause a percolating up, rather than a trickling down of social class values (Blumberg 1974). This dramatic switch, sometimes termed Radical Chic (Wolfe 1970), is the antithesis of the trickle-down theory of fashion (Simmel 1904), and took place when a large contingent of anti-status seekers began to copy the long hair, head bands, beads, and faded jeans of the existing counterculture. Content analysis of advertising reveals a decrease in the use of status-oriented themes during the 1960s (Belk and Pollay 1985). In sum, this period of time witnessed the first major assault on materialism and its status connotations in modern American Society.

The Resurgence of Status Symbolization

While the anti-materialism/status movement of the 1960s is well documented, monitors of American values have recently detected a rise in conservatism (Yankelovich 1981). For instance, Belk and Pollay (1985) also found that, although the materialistic advertising themes of doing (i.e., activity that is aided or provided by the product or service) still dominated those of having (i.e., ultimate value is derived only from ownership) during the 1970s, the trend is reversing. In other words, to the extent that advertising

reflects the values of those it is designed to appeal to, the status-oriented values of materialism are on the rise.

Several other recent societal trends suggest the reemergence of status encoding and decoding. The widely recognized Yuppie population, for instance, is capturing the attention of marketers of expressive products. A 1985 report on Pontiac's Grand Am led to the conclusion that Yuppies want "more personal cars in keeping with their need for self-expression" (U.S. News & World Report 1984). This encoding of status through consumption may be due to the large number of Yuppies who are upwardly mobile (i.e., as compared to those who have inherited status). Several scholars have noted that mobility is positively related to the use of status symbols within societies (Bensman and Lilienfeld 1979; Douglas and Isherwood 1979). Belk and Pollay (forthcoming) found that in Japan, a country with greater mobility over the past forty years than the United States, there has been a greater use of status themes in advertising. Taken together, these recent social trends suggest that the display and recognition of status symbols may again be a powerful component of American culture.

Intergroup Differences in Status Recognition

Observing the possible resurgence of status symbols is confounded by probable differences in status recognition among members of the population. Specifically, previous research suggests that age, social class, and sex (not investigated here) may all systematically affect decoding of status stimuli.

Age

The results of several studies point to an increase in status consciousness with age (Belk, Bahn and Mayer 1982b). Belk et al. found status and success inferences based on ownership of automobiles and housing strongest among college and adult aged respondents. Yet, another study conducted by the same researchers indicated that college students may rely more on visible consumption than adults when forming stereotypes (Belk, Mayer, and Bahn 1982a). Collectively, these findings suggest that consumption-based status inferences do increase with age, but may level off or even decrease after the early twenties.

Social Class

Members of different social class levels may also make disparate person inferences from consumption stimuli. When provided with ownership of brands in value-expressive product categories (e.g., automobiles and magazines), differences in user stereotypes (e.g., successful versus unsuccessful, informed versus uninformed) have been observed across members of different social classes (Munson and Spivey 1980). Differences in status inferences across social classes are less clear. Respondents of higher social class levels were found better able to form status inferences from living room pictures (Davis 1956) and from descriptions of other individuals (Form and Stone 1957) than those lower in social class. Another study, however, found nonsignificant differences in consumption stereotyping for adult respondents of different social classes (Belk, Mayer, and Bahn 1982a). The same researchers later discovered that children of higher social class formed stronger consumption inferences than those of lower social class (Belk, Bahn, and Mayer 1982b).

Studies indicate that prestige judgments based on occupational titles differ by indicators of social class (e.g., Alexander 1972). Hodge and Rossi (1978) conclude that while members of all social strata share a set of common values concerning the status of occupations, lower social class groups exhibit more error. Similar findings were reported when examining occupational prestige evaluations of respondents with different levels of education (Guppy 1982).

The existence of a positive relationship between social class and strength of status stereotyping from consumption stimuli is equivocal. However, between research specifi-

cally addressing this relationship and results from occupational prestige grading, the evidence is more in favor of this relationship than not.

The Study

Consumption Objects

Data were collected to assess the strength of status inferences related to material possessions and to discover whether or not this strength might differ by age and social class. Clothing was selected as the consumption cue because of its ability to convey information about status (Douty 1963; Belk, Bahn, and Mayer 1982b; Solomon 1983). Names of stores where clothing can be purchased, rather than clothing brands, were used as stimuli for making status inferences for two reasons. First, there is a smaller, more recognizable set of clothing stores than clothing brands. More importantly, the use of store names will facilitate comparison with an earlier study of status judgments that also used these stimuli (Felson 1978). The results of that study showed that "don't know" responses numbered up to 40 percent for some stores, leading to the conclusion that material lifestyles mask more than produce invidious distinctions. Several criticisms have been leveled at the methodology of this study, most importantly that it should have used patrons of stores as stimuli, rather than just store names (Semon 1979).

Modifying Hirschman's (1978) retail store typology, three stores where clothing can be purchased were selected from each of five categories including local department, national department, mass merchandise, discount, and speciality. Respondents were given a set of cards containing the store names and asked to remove all they were unfamiliar with. They were then instructed to rank the remaining cards from lowest to highest in terms of prestige, using as many piles as they wished. To allow for the possibility that patrons reflect more about the status of stores than stores themselves (Semon 1979), the cards were shuffled and respondents were later requested to rank the stores according to patron prestige.

Sample

Differences in consumption inferences may also exist by gender, but appear dependent on product class. When evaluating automobiles and housing, males seem to draw stronger person attributions than do females (Belk et al. 1982a; 1982b). Conversely, females appear to make stronger attributions when clothing is the consumption cue (Hamid 1972). The sample was defined as women 18 years of age or older. Therefore, if status expression (encoding) and recognition (decoding) have undergone resurgence since the 1960s or 70s, the exclusive female sample will have a higher probability of detecting this trend.

Mall intercept interviews were conducted at two large shopping malls within a medium-sized southwestern city. In accordance with the work of Blair (1983), a sampling plan was designed to provide maximum representation for time, day, and location. Editing resulted in a usable sample of 284 from a total of 316 interviews conducted. Comparison of this sample with income, education, and age data of the surrounding population revealed a marginal difference only with respect to age. The sample is somewhat skewed toward young females (mode = 18).

Results

The ability to successfully communicate status through clothing symbolism would be evidenced by finding a status hierarchy of stores and a high level of agreement among respondents within the hierarchy. Accordingly, the analysis proceeded by examining the status hierarchy, discerning the level of agreement, and then comparing agreement across class and age groups.

The 15 stores used as stimuli here do conform to a hierarchy (see Table 1). Similar to the price/quality dimension underlying Hirschman's (1978) retail store typol-

ogy, the prestige dimension yields an ordering of discount, mass merchandise, local department, specialty, and national department stores. Aberrations are one local specialty store and one national department store, which are both perceived as significantly less prestigious than other stores within their categories.

Despite the fact that none of the three national department stores have outlets close to the market where the data were collected, the majority of respondents had heard of them and were quite capable of evaluating their status. Only in one case are the number of "not heard of" responses greater for a national department store than for a local specialty store. The reputation of the more prestigious national stores is apparently due to substantial media and word-of-mouth communication. This conjecture is supported by the number of respondents who had not even been in any of these stores during the previous year (i.e., 71 percent, 77 percent, and 78 percent). Unfortunately, the instrument did not inquire as to amount of catalog shopping at any of the 15 stores. Although respondents may have not physically been in the three national stores, they may have formed impressions by seeing and/or purchasing clothing through the stores' catalogs.

Overall, the average percent of "not heard of" responses for the entire 15 stores is 14 percent. This is a lower figure than the average of 20 percent "don't know" responses Felson (1978) obtained from an inventory of five stores, all of which were selected on the basis of being well known within a local market (Chicago). Moreover, when the store inventory used here is paired for purposes of comparison (i.e., those store types not present in Felson's inventory - specialty stores and those stores without outlets in the same market), the average "not heard of" response is 1.7 percent. While the female sample used in this study may have inflated status recognition over what it might have been with a mixed sample, the data suggest that recognition of store status has risen over the past ten years.

Agreement in the prestige ranks of the entire sample was determined from coefficient of variation and kurtosis values. The coefficient of variation reflects the amount of dispersion in a distribution by expressing a variable's standard deviation relative to its mean. Kurtosis compares the peakedness of a distribution to that of a normal distribution. The height of the normal distribution equals a kurtosis value of 0, with values above indicative of a more peaked distribution (i.e., a greater level of agreement). As seen in Table 1, no coefficient of variation values exceed .5 (i.e., standard deviations are not 50 percent of their means), and all kurtosis values range from 2.12 to 39.48 (i.e., peakedness is at the least two times that of the normal distribution). Both of these measures show a consistent and substantial level of agreement in the store prestige ranks. Perceptions of status for two well-known discount stores and one national mass merchandiser are nearly unanimous, perhaps reflecting that people have a highly defined notion of what constitutes a low-status store.

As noted above, one of the primary criticisms of Felson's (1978) earlier study was not asking respondents to evaluate the status of the people who shop in stores (Semon 1979). Presumably, people would feel less sure about the status of an inanimate object (i.e., stores, cars, residential areas) than they would about the status of the people associated with them. The comparison in Table 1, however, shows only two instances in which kurtosis values are greater for patron than for store status. Cultural norms in America are comparatively less class oriented than they are in other countries (e.g., India, England), and the evidence here suggests that people have less difficulty making status evaluations of inanimate objects than they do of people.

The overall strength of status perceptions was determined from Kendall's Coefficient of Concordance (W) for all rankings. This measure reflects the total level of agreement between all respondents' rankings and ranges from 0 to 1, with 1 indicating absolute agreement. A problem is pre-

TABLE 1

STORE STATUS HIERARCHY

Store	Per- cent "Not heard of"	Store Prestige			Patron Prestige		
		Mean Rank	Coef. of Var.	Kur- tosis	Mean Rank	Coef. of Var.	Kur- tosis
Discount Store 1	6.7	1.11	.42	39.48	1.12	.39	39.48
Discount Store 2	.7	1.20	.39	16.23	1.30	.49	7.14
Discount Store 3	2.1	1.34	.48	5.47	1.39	.48	8.73
Mass Merchan- dise 1	.3	2.20	.42	3.86	2.19	.46	4.27
Mass Merchan- dise 2	.3	2.34	.46	16.52	2.38	.53	4.97
Mass Merchan- dise 3	.0	2.49	.47	5.14	2.47	.47	2.12
Local Specialty 1	21.5	3.38	.48	8.03	3.50	.52	4.07
Local Department 1	2.5	3.55	.46	8.62	3.60	.55	5.41
Local Department 2	1.4	3.56	.44	10.82	3.62	.57	4.36
Local Department 3	1.8	3.58	.47	9.92	3.60	.55	4.77
National Dept. 1(a)	10.9	3.80	.47	7.59	3.83	.60	4.95
Local Specialty 2	70.1	3.91	.41	9.58	4.10	.51	6.78
Local Specialty 3	34.5	3.93	.49	7.40	4.18	.57	4.43
National Dept. 2(a)	44.4	4.51	.35	10.30	4.49	.54	8.15
National Dept. 3(a)	13.4	4.68	.43	6.71	4.81	.57	3.69

(a) Full and/or single line department stores not in the market where the study was conducted.

mented by the number of "not heard of" responses for several of the stores. Because these responses reflect a lack of knowledge, and therefore agreement, their exclusion would inflate the value of the measure. One heuristic for solving this problem is to impute mean ranks for missing values. Another is to exclude the four stores with substantially higher percentages of missing cases. Employing both of these heuristics showed no significant differences between any of the possible W values. The overall strength of store status perceptions is exceedingly high (.73 to .89 depending on heuristic used) and is approximately equal to the strength of occupational prestige perceptions (.75 to .95 - c.f., Trieman 1977). As found above in the case of individual store ranks, there is more overall agreement in store prestige ranks than in patron prestige ranks (.81 versus .75).

The final research question concerned whether the strength of status recognition differs according to age and social class. Components of social class were examined separately including occupational prestige (Trieman 1977), education and income. After breaking the continuous variables into quarters, and education into appropriate categories, Kendall's W was calculated for respondents in each group. Because of the large number of missing cases across all four characteristics, Kendall's W was also calculated after eliminating all specialty stores and stores not located in the metropolitan area. While the latter analysis did result in several significant changes, the trends within characteristics remain similar.

The findings in Table 2 suggest that individuals are in high agreement in store prestige evaluations regardless of age or occupational prestige. However, level of agreement increases substantively as both education and income increase. This occurrence may provide a partial explanation for the equivocalness in the relationship between

social class and strength of status inferences found in prior studies. For instance, Belk et al. (1982b) measured social class by forming an index in which occupational status was weighted more heavily than education. The results here suggest occupational status and education, along with income, should be treated as conceptually distinct; combining them may lead to masking the separate underlying effects.

TABLE 2

STORE STATUS AGREEMENT BY AGE, EDUCATION, AND OCCUPATIONAL PRESTIGE

Characteristics	Agreement for All Stores		Agreement for Well Known Stores (a)	
	n	W	n	W
Age				
18-30	30	.94	145	.93
31-40	7	.99	35	.99
41-50	5	.99	18	.99
50 or more	17	.99	59	.98
Education				
Less than high school	10	.47	86	.32
High school degree	3	.45	26	.33
Undergraduate degree	24	.71	110	.66
Graduate degree	13	.84	36	.81
Income				
\$19,999 or less	18	.63	101	.40
\$20,000-\$39,999	18	.53	81	.54
\$40,000-\$59,999	9	.91	30	.78
\$60,000 or more	11	.93	21	.96
Occupational Prestige (b)				
30 or less	1	--	19	.96
31-45	36	.98	159	.98
46-60	16	.99	53	.99
60 or more	9	.99	16	.99

(a) Does not include specialty stores or stores not located in the study's market.

(b) Trieman's (1977) International Occupational Prestige Index reflects increasing prestige from 0 to 100.

Conclusions

The data collected here do allow one to draw conclusions regarding status recognition (decoding), but do not provide direct evidence of possible trends in motivations to express status through ownership of material items (status encoding). Yet, it seems quite unlikely that status decoding can exist independently of status encoding. People have to receive cues (e.g., from browsing, advertising, word-of-mouth) in order to form status attributions about brands or stores. For instance, the recent growth of materialistic themes in advertising (Belk and Pollay 1985) should manifest a greater level of awareness concerning how ownership of various brands can facilitate expression of status. The fact that these themes are growing in prevalence implies that consumers are responding favorably by demanding products and patronizing stores with materialistic positionings. Following this line of reasoning, the findings of this study suggest that both status recognition and expression in the consumption domain have risen considerably since the 1970s.

The results also provide a current insight of people's perceptions of the structure of retail institutions. Using multidimensional scaling to analyze free response data, Jain and Etgar (1976) found the primary dimension underlying discount, mass merchandise, and local department stores was prestige or status. The results here establish a similar and definite hierarchy of stores along the dimension of status, one which parallels the price/quality retail structure described by Hirschman (1978). This provides additional evidence that people organize stores relative to one another in the most parsimonious fashion possible, that being according to status or prestige.

The principle of least effort also seems to underly inferences made from occupational titles and physical

attractiveness. Both of these are among the first social cues elicited from strangers and they, as well as store prestige, are ambiguous and formed by Gestalt mental processes. Each of these three social cues are abstract and find their evaluations in the core values of culture. Barring few exceptions, studies of occupational prestige rankings (c.f., Goldthorpe and Hope 1972) and physical attractiveness ratings (Patzner 1985) find levels of agreement similar to those found here.

The results here may be further informed by studies of American ideology. Huber and Form (1973) concluded that consensus of major ideological tenets are greatest when they are stated in general terms, rather than when phrased as concrete situations. While store or occupational prestige do not directly reflect economic or political ideology, they nevertheless are global and demonstratively high in consensus. When stated in such abstract terms, the prevailing value system tends to obscure its day-to-day implications.

Although age and occupational prestige do not differentiate individuals' agreement of store prestige, education and income were found to be salient factors in discriminating the level of consensus. Comparable trends in agreement across education levels have also been found in studies of occupational prestige grading (Guppy 1982). To the extent that store prestige reflects dominant ideology, a similar explanation for these findings can be applied. Members of higher economic and educational groups, having benefited from the pluralistic American value system, are more unanimous than lower groups in their support of this ideology (Guppy 1982; Huber and Form 1973). Individuals of higher income have done well by this system, while those who obtained high levels of education are likely more informed about pluralistic ideology than those with fewer years of education.

Specifically related to consumption, individuals with higher incomes may have more homogeneous notions about the status of stores by virtue of their ability to shop across the entire prestige hierarchy. Individuals of lower income may never make purchases in more expensive and prestigious stores, while others may save money for occasional purchases in these stores. The result appears to be widely differing status evaluations of stores within the hierarchy.

The substantive differences in consensus across education levels may also be attributable to media consumption and course content. Education is positively related to magazine and newspaper readership (Hornick and Schlinger 1981), and this higher level of media consumption may result in more informed ideas of what represents store prestige. Higher education also emphasizes aesthetic experiences and provides opportunities for consumption of various cultural events. The resultant artistic abilities could cause the high levels of agreement found here among individuals holding graduate and undergraduate degrees.

Self-expression through status symbolization appears to be a viable behavior in the current social milieu. Status consciousness of material items again seems to be an important aspect of American culture. In lieu of increasingly conservative attitudes toward politics and careers, perhaps this result is not surprising.

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SOCIAL CLASS AND CONSUMER BEHAVIOR;
THE RELEVANCE OF CLASS AND STATUS¹

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Abstract

The use of social stratification in consumer research has been criticized for naive conceptualization. This paper examines the theoretical basis for asserting a close connection between social class structure and consumer behavior. Max Weber's seminal contribution to stratification theory provides the basis for this examination. Special consideration is given to the dimensions of class and status, which figure prominently in Weber's work. The relevance of this approach to consumer research is summarized in the form of several basic propositions.

Introduction

In the late 1950's and early 1960's, several contributions to the marketing literature appeared that pointed to the significance of social class for understanding consumer behavior. These early writings drew heavily on Warner's conception of social class--one which focused largely on position and prestige of families within relatively small, self-contained communities. The connection between social class and consumer behavior that was outlined by such individuals as Martineau (1958), Coleman (1960), and Levy (1966) was a somewhat broad one stressing variations in values, lifestyles, and general consumption goals. Many of the findings presented were based on syntheses of proprietary studies and thus actual quantitative evidence was rarely included.

Interest in this broad subject area continued through the 1960's and early 1970's, although with a somewhat different orientation. For it was at this same time that segmentation research was growing in importance, and social class studies in marketing were largely diverted into this research stream. To oversimplify somewhat, one might say that in the search for the so-called superior correlate with buying behavior, social class was perceived as a likely candidate. More specifically, some argued that social class would prove superior to income as a basis for segmentation. Thus the social class vs. income issue emerged, and within a period of a few years about a dozen articles appeared in the marketing literature that joined this debate (e.g., Wasson 1969; Myers, Stanton, and Haug 1971; Myers and Mount 1973; Hirschman and Peters 1974). The basic social class vs. income issue remained clouded during the seventies, and interest in it eventually waned.

Although the direct application of social class theory to consumer behavior may seem slight in recent years, the usefulness of the concept continues to be demonstrated. There are several research currents--consumption symbolism (Levy 1981; Belk, Mayer, and Bahn 1982; Solomon 1983), the impact of women's roles on consumption (Schaninger and Allen 1981; Reilly 1982), and the cultural context of consumption (Reilly and Rathie 1985; Hirschman 1985; McCracken 1986)--that use or expand upon stratification concepts. The apparent ease with which social class is subsumed by these and other research efforts suggests the concept is a potentially valuable one, but one also subject to

various interpretations.

Efforts to apply stratification theory more directly and precisely are becoming increasingly common. In this modest revival of interest, one finds the social class vs. income issue has been revisited, only this time with considerable more sophistication and methodological rigor (Schaninger 1981). Coleman, a pioneer in this area, has more recently (1983) published an article in the *Journal of Consumer Research* pointing to the continuing significance social class has for marketing and setting forth some methodological guidelines for research in this area. Also, Dominquez and Page (1981a, 1981b) have suggested how consumer behavior research in this area might best proceed, as have Shimp and Yokum (1981). Pulling these and other contributions together, the following criticisms, warnings, and recommendations seem to emerge:

1. Social class is a construct with "surplus meaning." No consensus exists as to the number, cohesiveness, separability, and distinctiveness of social strata. And yet, marketing researchers have reflected little on the reliability and validity issues surrounding the social class construct. The availability of a variety of stratification scales and the widespread use of certain of these have sometimes short-circuited full consideration of what precisely is being measured.
2. Much of the empirical work that has been done has been characterized by naive conceptualization (cf. Dominquez and Page 1981a on this point). At its most simplistic, research has unfolded in the following manner: a standard social class index is used to determine a family's social class membership, and then a direct link is sought between this variable and some other consumption specific variable such as product, store, or brand choice behavior. This approach is subject to criticism on several points. For example: (a) intervening variables are frequently ignored (e.g., life-cycle stage), (b) inappropriate statistical techniques are used to measure the effect of stratification (often bivariate techniques which ignore the aforementioned intervening variables), (c) choice of dependent measures is frequently ill-suited for testing social class influence.
3. Reliance by marketing scholars on an essentially Warnerian framework--a view of social classes as discrete membership groups that evidence a high degree of cultural homogeneity--has produced research that has principally sought to demonstrate the existence of significant differences in consumption behavior across classes. Such an approach, while certainly legitimate and necessary, has for the most part left unexamined the diversity and dynamism of intra-class behavior. This flaw is especially serious given the rise in two-income families, female-headed households, and other types of living arrangements that depart from the traditional marital-couple mold. Indeed, many of the instruments used to measure social class assume a family in which

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the male head is the sole wage-earner and is most likely at the peak of his earning capacity. This approach seems especially ill-suited for handling issues surrounding (a) social mobility and status attainment, (b) life-cycle changes and their impact on social standing, and (c) status inconsistency and status crystallization.

Class and Status Dimensions

This paper makes no claim to resolve these longstanding problems. Instead it argues that a particular view of social class structure--one originally proposed by Max Weber and subsequently developed and researched at length by sociologists--can be especially helpful in understanding certain aspects of consumer behavior. Furthermore, it is a view that begins to address the aforementioned problem areas.

Weber's conceptualization of social class is appropriately delimited and yet avoids the inflexibility of the somewhat outdated Warnerian view. In addition, this approach offers a compelling explanation of why one expects to find a close connection between social class position and consumption-related activities.

Weber (1946) recognized that social stratification² was a multidimensional phenomenon. He asserted that society was ordered along several hierarchies, with class and status being the principal stratification dimensions. Class, for Weber, was largely an economic category. It has been variously associated with occupation, wealth, or, more broadly, life chances. Status, on the other hand, has to do with social distinctions and thus has been commonly linked with lifestyles.

Consumer researchers have not usually found the distinction between class and status a useful one to make. Wilkie (1986) offers a possible explanation for this:

Marketers and consumer behavior professionals have tended to concentrate almost entirely on the life-style dimension, as this reflects most directly the purchasing patterns and consumption habits of different social classes.... [O]ther fields [have given attention] to the life-chances dimension of social stratification (p. 659).

To press this point a bit further, one might suggest that the connection between social class and life-style has been made too closely. For example, the assertion that lifestyle is "the essence of social class" (Myers and Guttman 1974) is an overstatement and may encourage the neglect of other social class aspects.

Dominquez and Page (1981a, 1981b) maintain that the distinction between class and status is highly relevant for consumer researchers working with social stratification issues. Indeed, they propose that at the outset of any study one must determine whether the consumption-related behavior is more likely to be related to class or status. Furthermore, they offer

² This paper will use the terms "social class" and "social stratification" interchangeably, although strictly speaking a society may be stratified without having distinct social classes. The concepts of class and status, however, are distinguished from each other. This reflects Weber's use of the terms, but is frequently at odds with ordinary usage, which uses terminology like class level and social status interchangeably. The relationship between the concepts of class and status and the broader phenomenon of stratification will be developed further in this paper.

the following guidelines for making such a determination:

Class centers on the individual and his/her occupation, while status revolves around the family and its position in the community based on home type, location and value, interactions, and memberships as well as education, family, background, and occupation. Therefore class is best suited to those consumer decisions that are predominantly individually, rather than jointly, made or delegated to the family. Class is also best suited to those values, lifestyles, and communication patterns that are centered on work, leisure (because of the impact of occupational role on availability, use of and spending for leisure time), investment, saving, and attitudes toward and perceptions of financial outlook (1981b, p. 156).

Dominquez and Page challenge consumer researchers to think more precisely about what social class is and why one expects it to be related to consumer behavior. In addition, they assert that class as well as status aspects of social class structure are relevant to consumption. However, in framing the class/status question in somewhat stark terms as an either/or matter, they have underestimated the interdependent nature of these stratification dimensions.

The connection between class and status is especially relevant when considering human behavior in the consumption role. Indeed, according to Weber the dimensions of class and status are connected via the market mechanism:

With some over-simplification, one might thus say that "classes" are stratified according to their relations to the production and acquisition of goods; whereas "status groups" are stratified according to the principles of their consumption of goods as represented by special "styles of life" (Weber 1946, p. 193).

The relationship between class and status is complex. Weber went beyond the Marxist position that class is the primary determinant of status. The social closure that is accomplished by various status groups can in turn have a profound influence on class and attendant economic realities. Thus lifestyle does not simply flow from social standing but rather plays a central role in the establishment, maintenance and modification of structured social inequality.

Lifestyles and the consumption patterns which support them can take on the character and function of exclusion mechanisms (Boskoff 1972) and thus serve to prevent mobility and to institutionalize privileges. While it is certainly obvious that the absence of adequate economic resources can effectively prevent one from practicing a certain lifestyle, it is perhaps less obvious that the various values, skills, and aesthetic standards embodied in a particular lifestyle may also resist easy acquisition or imitation and therefore they can just as effectively limit one's economic and social opportunities. Even for status groups not at the top, social closure accomplished by lifestyle can insulate and protect such groups from outside influence and thereby afford them a measure of autonomy.

Propositions

The preceding discussion has argued that the relationship between social class and consumption is a fundamental one. We have held that style of consumption is not only an expression of a particular social class orientation, but also a mechanism that figures prominently in the actual shaping of the social structure.

The essential elements of this perspective are summarized and expanded in the form of several basic propositions.

Proposition 1: Social class is a useful construct for explaining consumption behavior because it offers insight into both the various resources that limit consumer choice and the preferences that direct the allocation of those resources.

Perhaps the significance of this proposition can be illustrated by way of a comparison. Economic theory of consumer behavior starts with a consumer's budget constraint and his preferences for some assortment of goods and then sets about determining how the consumer will allocate his scarce financial resources so as to maximize utility. The theoretical apparatus inevitably leads to this point of equilibrium, but only if the consumer's tastes can be treated as given. Social class analysis steps into this vacuum, giving evidence that important differences in lifestyles and consumption patterns stem from corresponding differences in social standing. But not only does this perspective offer insight into consumer preferences and tastes, but it also deepens our understanding of the particular constraints under which the consumer acts in the marketplace. There are at least four resource dimensions that are encompassed in social class structure:

Financial. The concentration of wealth at the very top of the social spectrum in the United States is enormous. Gilbert and Kahl (1982) estimate that the so-called capitalist class, which accounts for 1 percent of the U.S. population, controls about half the country's wealth. Considering the entire class structure, we find that the class-income correlation can be estimated at about 0.4 (Coleman 1983). This figure, while quite significant, underlines the fact that income class and social class are not interchangeable concepts.

Social. People tend to associate with social class equals in their friendships, marriages, organizational memberships, and residential choices (Warner 1949; Hollingshead 1950; Laumann 1966; Simkus 1978; Gilbert and Kahl 1982). Furthermore, as social class rank increases so too does level of social participation (Kahl 1957; Hodges 1964; Curtis and Jackson 1977). Thus higher social class rank suggests a wider social network than does lower, which is characterized by kin-oriented ties that are further restricted in a geographical sense (Coleman 1983). Social skill and occupational position seem inextricably linked; entrance and advancement into many middle and upper-middle class occupations depends significantly upon one's ability to demonstrate certain social attitudes and traits (Lynd and Lynd 1929; Whyte 1952; Kanter 1977). Similarly the occupational position of parents strongly colors the socialization of their children, thereby inculcating social values which may either facilitate or inhibit occupational achievement (Kohn 1969).

Cultural. Familiarity with cultural matters and the possession of cultural credentials appears to be strongly associated with higher social class standing (Bourdieu 1973). Cultural capital is sometimes acquired--typically through the acquisition of appropriate academic credentials or through participation in cultural affairs--in an effort to enhance or improve one's social standing (DiMaggio 1982).

Time. Perceptions of time appear to be strongly conditioned by social class membership. Three findings in particular emerge: (1) lower class members reveal a more restricted orientation to future events than those from the middle class

(Davis and Dollard 1940; LeShan 1952; Bernstein 1960, 1968; Horton 1967; Liebow 1967); (2) lower class members with upwardly mobile aspirations and who have had an opportunity to gain anticipatory socialization into middle class values and standards are less likely to have constricted time horizons than their social class counterparts without such aspirations (Ellis and Lane 1966); (3) regardless of social class level, persons with constricted time perspectives are at a competitive disadvantage in meeting the institutionalized role demands of the middle-class world (Davis and Dollard 1940; Teahan 1958; Bernstein 1960, 1968; Cohen, Fraenkel, and Brewer 1968; Williams 1970). The value and availability of time also varies across social classes. Because their time is worth more in economic terms, individuals with higher social class standing frequently find themselves with little leisure time (Linder 1970). At the same time, higher class standing implies greater freedom and flexibility in managing time constraints (Douglas and Isherwood 1978).

Without at all denying the centrality of income and wealth as a determinant of consumer choice, most social class theorists would maintain that economic resources are typically mediated and augmented by other resource dimensions. In addition to making distinctions among various types of resources--financial, social, cultural and time-related--one should also make a distinction between the resources one brings to the market and the particular manner in which those resources are deployed. The latter distinction between consumption possibilities and actual consumption patterns mirrors the distinction Weber makes between class and status dimensions.

Proposition 2: Class structure is latent; status, manifest. Class position contributes significantly to status configurations. Status differentiation is in turn linked to variations in consumption activities via the lifestyle mechanism.

The consumption potentialities suggested in class indicators are realized in status groups; life-chances are transformed into lifestyles. This proposition can be further developed by another comparison to economic theory, in this instance, to the "new" economic theory of consumer behavior (Becker 1965; Gronau 1977). This perspective views consumption as a process that is not unlike the production process. Just as a firm inputs capital and labor to produce goods, so too does a household combine goods and time to produce commodities that in turn yield utility. And just as it is possible to speak of a technology associated with the production of goods, so too can one consider a household consumption technology. (Some households may exhibit higher levels of efficiency than others; some may have goods intensive technologies and others time or leisure intensive ones.) And, finally, just as capital and labor draws its value from its productive potential, so too is the social significance of the consumer's resources (class indicators) ultimately realized when they are fashioned into a particular lifestyle (status indicator).

Lifestyle, as used in the present context, is identified as an equilibrating mechanism by which potentialities for behavior are translated into actual behavior deemed appropriate to a particular social position. On the one hand, certain styles of life cannot be realized (or are realized with great strain and difficulty) in the absence of the requisite resources. Status is not independent of class. On the other hand, there is some uncertainty surrounding the precise manner in which class position is trans-

lated into status structures. Boskoff, who has given special consideration to the role of lifestyle in social stratification, views lifestyle as "a trial-and-error cumulation of shared adaptations to a set of social opportunities and restrictions" (1972, pp. 159-160). Position, therefore,

does not necessarily "cause" style of life, but rather provides cues in specific recurring situations that tend to elicit an unplanned but "logico-meaningful" set of attitudes, values, and actions. The functional or adjustive value to the actors of a style of life may be inferred in part from the tenacity of such values and their relative immunity from external attempts at change (1969, p. 263).

Another issue, suggested by the above quote, concerns the consistency and stability of lifestyles. If styles of life are conceived as adaptive mechanisms, then as conditions change or perceptions of conditions change so too will lifestyles. Lifestyle reflects an ongoing series of judgments about resources and rewards, limitations and opportunities that confront individuals and families. The process is not a haphazard one. The social class structure itself points to the existence of a set of lifestyles that serve as "fixed valuation points" (Boskoff 1972) or "ideal types" (Kahl 1957). This is no less true in a society characterized by social mobility. The argument can in fact be advanced that status achievement is facilitated by the presence of these value systems; they ascribe meaning to one's choice of goals and the means to those goals.

Proposition 3: Goods may be said to take on the properties of status symbols if the purchase and use of them is indicative of membership in a particular status group. Furthermore, status symbols are efficacious only insofar as there are restrictive mechanisms associated with their appropriation that serve to limit their "fraudulent" use.

Goffman's analysis (1951) of status symbols reveals several different mechanisms that can limit the inappropriate use of such objects. Therefore, when considering which articles of consumption may function as status symbols, one must recognize that restrictions limiting their appropriation may arise from several different sources. Limited financial resources can of course restrict the use of many goods, but there are other resource dimensions that just as effectively limit consumption opportunities. Limitations or restrictions having to do with time, social skills, ability, and family history can also figure prominently in several areas of consumption.

Advertisements that make appeals to status assume a variety of stances with respect to these restrictive mechanisms. For example, the following slogan makes clear the financial demands implied by ownership: "As long as there are people who can afford perfection, BMW will continue to build it." It may be possible to relax one restrictive mechanism, while introducing another--an approach taken by a paperback book club that offers its goods to "smart people who aren't rich." Yet another possibility is provided by the appeal which is unabashed in its circumvention of the restrictive mechanism. This is found in an advertisement for Levolor blinds that offers guidance on "how to decorate rich, rich, rich when your not, not, not."

Status symbols essentially embody the conjunction of Weber's class and status dimensions. An individual can employ consumer goods as status symbols and in so doing attempt to claim a particular social standing or to attribute social significance to his behavior. But the claim remains distinct from the basis for that claim, just as status aspirations remain distinct from the

class realities.

When class and status dimensions are not consistent either at the individual or the societal level, then instability and insecurity results, fostering an increased use of status symbols (Gerth and Mills 1953). Belk (1986) has recently speculated that the conspicuous consumption of yuppies may stem in part from their relatively slow occupational advancement and inadequate gains in real income. Their consumption is compensatory in the sense that consumption gratification (a status concern) is being substituted for job satisfaction (a class consideration).

The precise focus of compensatory consumption also reflects the influence of class and status. Simply put, some spheres of consumption are more restrictive than others, and some consumers may seek to emphasize those areas of consumption which are relatively speaking, less restrictive. Of course, the term "restrictive" is used in a relative sense; determinations as to which areas are restricted or not depends upon an assessment of one's control over a variety of resources (i.e., money, time, etc.) vis-a-vis the type and level of resource needed to secure a particular consumption goal.

For example, a family with limited financial resources may recognize that certain high-priced luxuries are beyond its means; however, that same family may find that it does have the resources required to engage in various forms of social or cultural consumption which provide important, alternative sources of satisfaction and status. Many similar scenarios are possible. Time and effort can frequently be substituted for money. And money can be spent in a manner intended to compensate for limited access to highly restricted social circles.

When, by necessity or choice, consumption is focused in one area and not another, there seems to be a tendency to elevate the importance of the former, while denigrating that of the latter. Tumin (1967) expands on this tendency:

If [an individual's social rating] depends on his manifestation of a number of criteria, and if he fulfills more of some criteria and less of others, he will tend to stress the importance of those he fulfills while he minimizes the importance of those unfulfilled: If his home is modest but his children attend good private schools, he will call attention to this fact and at the same time he will stress the importance of maintaining only a modest residence (p. 101).

Such behavior is similar in its aim to certain dissonance reduction efforts; it compensates for the inadequacies of one's own choice by minimizing the attractiveness of those options which were either foregone or denied. Thus, in matters of consumption, the consumer may find it helpful to make a virtue out of necessity.

Proposition 4: Just as consumption style can be used as a technique of exclusion, serving to maintain the privilege and status of those who belong, so too can consumption "finesse" or expertise provide a means of penetrating class and status barriers. In other words, consumption can be enlisted as a strategy to advance social class standing.

Restrictive mechanisms are not impenetrable barriers. For those possessing social aspirations and desiring upward mobility, the appropriate lifestyle and corresponding consumption style must be identified and learned. One can hypothesize that genuine social class mobility consists of this complementary movement through both class and status dimensions: objective

success as measured by career advancement, educational credentials, or personal wealth must find distinctive expression in the appropriate "higher" style of life. Consumption styles aspiring to this new standard, but found wanting, risk the kind of scorn that has traditionally been heaped on the excesses of the nouveau riche. And yet, because validated acceptance into a higher stratum depends primarily on the successful manipulation of the signs and symbols of the corresponding lifestyle, social acceptance may sometimes be gained without real objective ascent.

Consumption, therefore, can be viewed as a kind of skill. Scitovsky (1976) makes this point within an historical context: "Until the end of the eighteenth century, education was a privilege of the leisure class and consisted, appropriately enough, of training in consumption skills" (p. 229). In our present age, one can speculate whether an apparent proliferation of consumption guides, as well as the continued emergence of influential tastemakers (e.g., fashion experts, architects, interior designers) that develop and maintain the status machinery, does not reflect a prevalent status anxiety which stems in part from individuals cross-pressured by class and status inconsistencies.

Conclusion

In virtually all societies, there are visible and significant differences in the availability and possession of valued items. Social class theory asserts that this unequal access to scarce resources and desired rewards is by no means a random process. There are mechanisms or social processes that contribute to both the consistency and permanence of structured social inequality. One such mechanism--the most crucial one--is provided by the marketplace, defining as it does both consumption possibilities (i.e., class variables) and actual consumption patterns (i.e., status variables). This paper has attempted to develop this insight further, focusing discussion on the Weber's seminal contribution to stratification theory and suggesting its relevance for consumer research.

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PREFERENCES OF NATIONALISTS AND ASSIMILATIONISTS FOR ETHNIC GOODS:
AN EXPERIMENT WITH FRENCH-CANADIANS

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Abstract

This research, building on past studies of ethnic minority consumer behavior, briefly presents a typology of individual minority responses. They are posited to mediate the hypothesized preferences of ethnic minority individuals (MI) for ethnic goods. Two main contrasted types are clearly recovered empirically: nationalists and assimilationists. The latter do tend to prefer EC (English-Canadian) to FC (French-Canadian) goods while the former tend, with some ambiguity, to prefer FC to EC products. It is suggested that future research should define and inventory a repertoire of ethnic products, situations and behaviors.

Introduction

Research on the consumption behavior of ethnic minorities is important for several reasons. First, both ethnicity (Hirshman 1981, 1983, 1982) and, often overlapping, minority group membership appear to have profound effects on consumer behavior (Sturdivant 1973). It remains a major consumer characteristic even after controlling for socio-economic factors (Robertson, Zielinski and Ward 1984; Schaninger, Bourgeois and Buss 1985).

Second, ethnic minorities live in and are spread across a great many nations around the globe (Hunt and Walker 1979). Knowledge about the impact of ethnic minority subculture on consumer behavior could provide guidance to international marketers who operate in countries and world regions divided along ethnic lines.

Third, the similarity of research issues identified in the study of, mostly, Black and Hispanic subcultures in North-America could extend to all ethnic minorities worldwide. They do not constitute a negligible part of the world population.

One of the key issues, yet to be resolved, (Lefebvre 1975; Mallen 1973) concerns the dichotomy in subcultural motivations: "... the preference for cultural integration versus the preference for cultural distinctiveness." (Robertson, Zielinski and Ward 1984, p. 539) as they relate to consumer behavior. The present study focuses on this issue, framed in the Canadian context. FC society is another North-American ethnic minority subculture worthy of attention by its size and distinctiveness (Engel, Kollat and Blackwell 1978). Briefly stated, we attempt to answer the following question: "Do FC nationalists prefer FC to EC products? Do FC assimilationists prefer EC to FC products?"

Conceptual Framework and Hypotheses

The framework conceptualizes FCs as members of an heterogeneous ethnic minority subculture. Heterogeneity stems from the various patterns of adjustment of each member to his minority status - minority responses - ranging from nationalist to assimilationist. The different types of individual adjustments are posited to mediate their preferences for ethnic goods. Ethnicity, being a common dimension to the person and the choice object should provide a good anchor to preferences for

ethnic goods. Ethnicity, being a common dimension to the person and the choice object should provide a good anchor to preferences for ethnic goods.

A Typology of Individual Minority Responses

Minority response refers to the way in which a minority individual (MI) adjusts socio-psychologically to his disadvantageous situation ascribed to him as member of a MG. The MG situation can be viewed as the antecedents, and the minority response as the consequence of the situation. Some of the key elements of the situation, are: 1) the trait or symbol that sets MIs apart from the DG - its' visibility and stability over time (For FCs, the French language and, less visibly, catholicism; Johnstone 1966), 2) the nature of the relationship between DG and MG - relative power and extent of the differences between the two groups, frequency and kind of contacts between MG and DG persons and, 3) the severity of discrimination and prejudice from the DG (Simpson and Yinger 1985). In the response per se, the MI adjusts in terms of 1) ego-involvement (Rollins 1973) and direction of his ethnic identifications with his own group (Caplan 1970, Noel 1964, Parker and Kleiner 1964, Plax 1972) and with the DG (Frazier 1957) - the two key subcultural motivations of group distinctiveness versus integration - as well as 2) his desired goals for the MG in its' relations with the DG, ranging from separation from to assimilation into the DG (Gordon 1964, Kurokawa 1970, Shemerhorn 1970). Clearly, the adjustment of a MI to his disadvantageous status will contain both his perceptions of the situation together with the key dimensions of his response per se. Conceived as a momentary state of the individual, and not as a dynamic process evolving over time where situation and response would feed back on one another, MI response will be taken to mean both the MI's perceptions of the situation and his response per se.

No two MIs will respond in exactly the same way. However it is possible to classify them among various analytical types. The nationalist feels strongly about his ethnicity. He considers himself similar to FCs and identifies positively with FCs. He feels dissimilar to ECs, identifies negatively with ECs and perceives ECs to differ from FCs. For him the goal of FC society is to separate from EC society. He opposes assimilation. The assimilationist stands in complete symmetry to the nationalist. He wants to abandon his own ethnicity and blend into the dominant group thereby adopting its values, life style and language. Eventually, if the DG concurs with no discrimination and prejudice, the MG will disappear, merged into the wider society. Nationalists and assimilationists should form the majority of subjects from a FC sample (1).

Hypotheses

- They flow directly from the typology.
- H1: Subjects will be classifiable as nationalists or assimilationists, predominantly.
- H2: The assimilationist prefers EC products to FC products.
- H3: The nationalist prefers FC products to EC products.

The Choice of Ethnic Products

An ethnic product would be perceived, in the present context, by FC consumers along a salient attribute of French to English-Canadianness. The products chosen were presumed ethnic by:

1. their ethnic symbolic meanings - eight kinds of woolen hats bearing clearly ethnic symbols, from FC (Quebec flag, "fleur de lys") to EC (Canadian flag, maple leaf) via neutral symbols (stripes or stars). These various kinds of hats were currently worn by students on campus during the winter.
2. their brand names - eight brands of cigarettes, from FC ("La Quebécoise") to EC ("Export A", "Players"). "La Quebécoise" had been recently introduced and aggressively targeted to the separatists.
3. different levels of ethnic cues attached to "Calmine" - a fictitious brand of analgesic - and "Presto" - a fictitious brand of instant coffee - as the different treatment levels in an experiment attempting to simulate the effects of a radio advertising campaign. The ethnic cues, and treatment levels, were manipulated via a) the name and location of the manufacturing firms - from EC, "Toronto Laboratories, Inc." manufacturing "Calmine" and "Nutritex of Ontario, Ltd." manufacturing "Presto", to FC "Les Laboratoires de Montreal, Inc." and "Nutrition du Quebec, Ltee." manufacturing "Calmine" and "Presto" respectively, and via b) the accent assumed by the announcer in French language radio ads for "Calmine" and "Presto" - alternatively EC, international French and popular FC (2)

Methodology

Sample

The sample consisted of 194 students - 2/3 full-time and 1/3 part-time - enrolled at the School of Business at Universite Laval in Quebec City.

They form a cohort, appropriate for the testing of a theoretical framework (Hirshman 1981). A recent business school pool had shown students were just about split on the separatist issue, thus ensuring variability on a key independent variable. No external validity of the results may be claimed.

Participation was voluntary. Only those subjects who participated throughout the experiment, were naive with respect to its purpose and were of FC culture, have been kept in the sample. As compared to the Quebec population at large, the sample is upscale in income, younger and more separatist.

Measurement

In order to portray the types of MI responses, from nationalists to assimilationists, we need a set of independent variables to assess the subjects' perceptions of their minority situation and response per se. The extent of differences between EC and FC group

(1) Three peripheral analytical types should not appear in great numbers from a sample of FCs. For the pluralist, ethnicity is not a salient matter. He does not feel strong preferences for one group over the other. The two groups should remain distinct, equal and mutually tolerant. He favors neither assimilation nor separation. The alienated, downrating both his salient ethnic identifications, would live in self-hatred. The marginal, forced to stay in a group he would like to leave - MG - and kept outside a group he wants to integrate - DG -, remains at the margin "...poised in psychological uncertainty..." (Stonequist 1957) between the two societies. If FC society forms an ethnic minority subculture, it never had to endure as severe a disadvantageous position in Canada as that of Blacks in the US, the object of much of the literature upon which the typology is based.

members as well as prejudice are key elements of the situation, as perceived by MIs. It materializes in the stereotypes "...[a] community shared belief reflecting the image one group holds of another" (Gardner, Rodensky and Kirby 1970). On the basis of research conducted on Blacks and Whites in the United-States (Simpson and Yinger 1985) and on FCs and ECs in Canada (Taylor, Bassili and Aboud 1973, Taylor, Simard and Aboud 1972), on the average, differences in stereotypes should exist and be favorable for the DG while derogatory for the MG, as perceived by MIs. Stereotypes of ECs and FCs were measured along 10 bipolar adjectives from studies of stereotypes in Canada and 29 life style statements from a comparative proprietary psychographic study (Bell Canada). Five adjectives and five life style statements exhibited the largest degree of difference between the two groups. Compared to their EC counterparts, on the average, FCs perceived themselves as more timid, submissive, follower, nervous, naive, afraid of the future, belonging to less clubs, less self-confident, regretting the good old times more often and, disliking to take risks. These 10 most contrasted dimensions were kept to compute an index of profile difference/similarity - euclidean distance - between ECs and FCs.

To measure the MI response per se, we operationalize ethnic identification in two different ways, assess ego-involvement with FC ethnicity via latitude of non-commitment and, last, attitudes toward the MG goals in its relation with the DG: assimilation and separation. Two main reasons justify the use of two different methods of measurement of ethnic identification. One, it is a key element of the MI response per se. Two, evidence from studies of stereotypes in Canada strongly suggest that derogatory images of FCs by FC subjects filter through only indirect measures (Lambert et. al 1960). Both are emic measures, the appropriate type, as cogently argued by Hirshman (1981).

First, ethnic identification with (or against) both EC and FC is inferred from a profile similarity index - euclidean distance - between self-EC then self-FC. Profile similarity would mean positive identification, while profile difference would reflect negative identification. Second, ethnic identification was gauged by a direct measure of attitude toward FC and EC borrowing the scale from Dutta, Norman and Kanungo (1969). On the average, the sample was slightly more favorable to FC than EC. Latitude of non-commitment provided a basis for estimating ego-involvement with attitude toward FC (Larimer 1968).

Attitudes toward the goals of the minority - assimilation and separation - were recovered via a factor analysis of 24 Likert type items designed for that purpose. A third significant factor tapped attitudes toward the survival of FC culture and has been kept to portray MI responses.

Finally, the dependent variables, preferences for ethnic products, were measured by a paired comparison technique, the dollar-metric (Pessemier et. al. 1971). This technique produces individual interval preference scales appropriate for the analysis. All scales, their sources and their estimated reliabilities appear in Table 1.

(2) Thank you to Robert Tamilia for sharing his radio ads.

TABLE 1
RELIABILITY ESTIMATES FOR MEASURES OF THE
DEPENDENT AND INDEPENDENT VARIABLES

Dependent Variables	Reliability	Source
Preference for:		
1. Woolen hats	.59(a)	Pessemier et. al. 1971.
2. Cigarettes	.69(a)	
3. Analgesics	.62(a)	
4. Instant coffees	.65(a)	
Independent Variables:		
Profile similarity between:		
1. EC - FC	.53(d)	Tigert 1972, Schellink(1), Taylor et. al. 1972, 1973.
2. Self - EC	.58(d)	
3. Self - FC	.66(d)	
Attitude toward:		
4. FC	.72(b)	Dutta et. al. 1969.
5. EC	.72(b)	
6. Assimilation	.85(c)	Berry(1)
7. Separation	.67(c)	
8. FC Culture	.61(c)	
9. Latitude of non-commitment FC	.78(c)	

(a) Test-retest.
(b) According to the authors.
(c) Cronbach
(d) Convergent validity.
(1) Thank you to Tom Schellink (Bell Canada) and John Berry (Queens University) for sharing their attitude statements.

Experimental Design and Data Collection

Hypotheses 2 and 3 were tested correlatively for woolen hats and brands of cigarettes. The ethnicity of the fictitious brands of analgesic "Calmine" and of instant coffee "Presto" were manipulated in an experiment. Presumably, if the brand is presented to subjects as manufactured by a firm located in Ontario, bearing an English name and sponsoring a radio ad in which the announcer assumes an EC accent, it would be perceived as an EC good. At the other extreme if the brand is manufactured by a firm located in Quebec, bearing a French name and sponsoring a radio ad where the announcer assumes a popular FC accent, it would be perceived as an FC good. Initially six different treatment combinations were planned (1) but we ended with only 4: (2 company names, EC and FC) x (2 types of accent in the radio ad, international French and popular FC). The radio ads were very realistic and of professional quality. They differed only by the accent assumed by the same announcer. To control for pre-measurement effects we used a Solomon eight group design. Four groups - classes - were submitted to premeasures of product preferences and independent variables. The next week, they listened to two radio ads, played on a tape recorder. They listened first to the ad for "Presto" and expressed their consequent preferences for brands of instant coffee, then they listened to an ad for "Calmine" and expressed their preferences for brands of analgesics. In each class the same level of accent was used for both radio ads. Each class was also split between the students receiving EC or FC company names as the sponsor of the ads. It was more convenient to assign classes randomly to treatment combinations - essentially, level of accent - than individuals. Another four post-only groups - classes - were subjected to the same four treatment combinations. A control group filled out all questionnaires without being exposed to any treatment.

Analysis and Results

Test of Hypothesis 1: Grouping the Respondents by Types

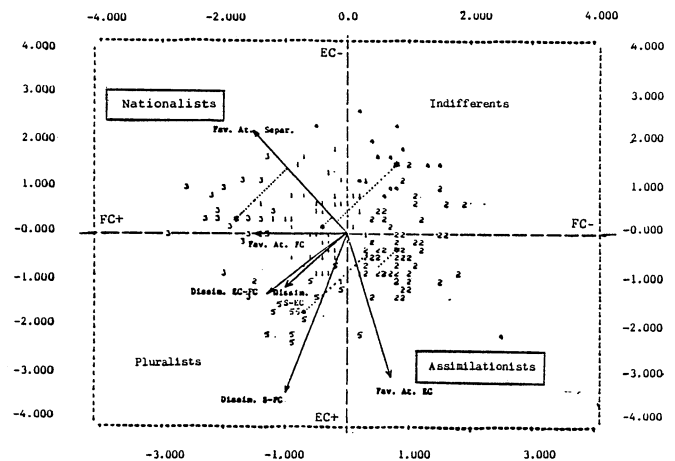
Similarity coefficients, Cattell's Rp, were computed between the profiles of each pair of respondent on the nine independent variables listed in Table 1. Cattell's Rp behaves as a correlation coefficient taking on a value of 1 when both profiles completely overlap and of -1 when they are symmetrically opposed (Cattell, Coulter

(1) In pretests, it clearly appeared that brands of cigarette were not perceived along ethnic dimensions (woolen hats were) and that the EC accent was perceived as anything but EC. Thus, they were dropped from the

analysis and Tsujioka 1966). The resulting matrix of coefficients was submitted to a principal component analysis and a varimax rotation. A three factor solution was retained as it uncovered five types of respondents, the number expected a-priori: two central types, assimilationists and nationalists plus three peripheral types. In order to partially test the validity of the types, the sample was split into two random halves and the analysis repeated on each. A multivariate profile comparison test (Allaire, Silk and Tsang 1973) showed that the average profiles of each pair of equivalent types inferred from each sample half were parallel and at the same level. Further, a discriminant analysis (Johnson 1971) shows the positions of the respondents, that of the independent variables as vectors and that of the group centroids within the axes of two first linear discriminant functions (Figure A). The first two and only significant functions may be interpreted as the two key dimensions of ethnic identifications with FC and EC. The majority of respondents were thus classified: 169 out of 194.

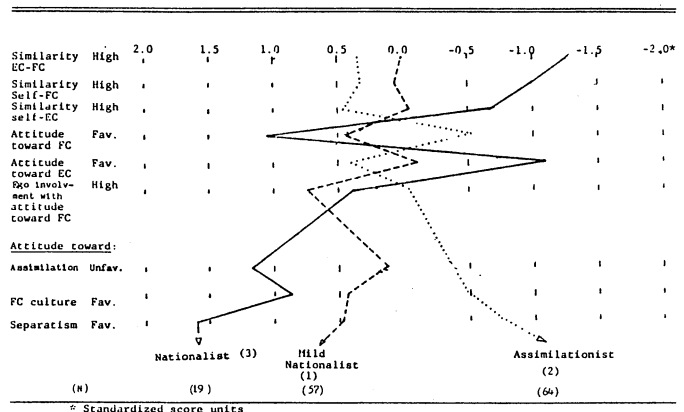
Figure A.

DISCRIMINANT ANALYSIS ON THE TYPES OF RESPONDENTS DEPICTING RESPONDENTS, INDEPENDENT VARIABLES AS VECTORS AND GROUP CENTROIDS (*) WITHIN THE SPACE DEFINED BY THE FIRST TWO DISCRIMINANT FUNCTIONS



As expected, the two central types account for the great majority of the respondents, 140 out of 169. The mean profiles of the central types appear in Figure B. The assimilationist (type 2, N = 64), as compared to the other types, shows the least favorable attitude toward separatism, FC culture and FC but the most favorable

Figure B. MEAN PROFILES OF THE TWO CENTRAL TYPES: NATIONALIST/MILD NATIONALIST AND ASSIMILATIONIST

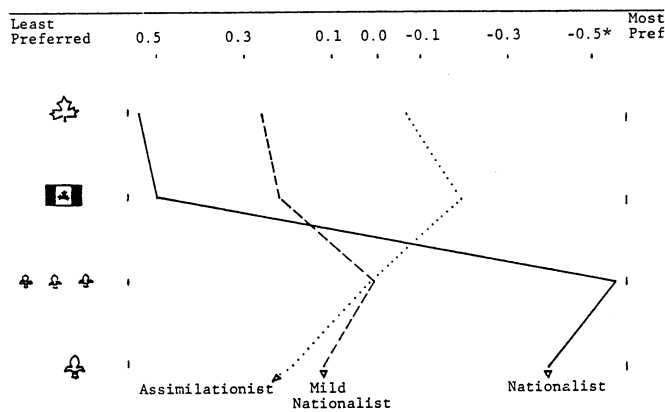


attitude toward EC. He perceives some difference between EC, FC and self but, contrary to expectations; not differentially. The nationalist, (type 3, N = 19) holds the most favorable attitude toward FC and the most unfavorable attitude toward EC and perceives the most difference between EC and FC. To him, FC ethnicity is ego-involving. He appears to be the extreme nationalist most favorable to separation, FC culture and most opposed to assimilation. The mild nationalist (type 1, N = 57) resembles the separatist's profile closely but remains less extreme on all dimensions except for the highest degree of ego-involvement. Thus, hypothesis 1 receives strong support.

Test of Hypotheses 2 and 3

Examining the preferences of the three types for woolen hats, hypotheses 2 and 3 receive support. Figure C illustrates the profiles of preferences of the

Figure C. PREFERENCES OF EACH TYPE FOR WOOLEN HATS



* Standardized score units.

nationalist, mild nationalist and the assimilationist. A series of univariate F-tests were all significant at the .05 level except for the difference in preferences of the assimilationist and the mild nationalist for "fleur de lys". Thus H2 and H3 are supported by the results, clearly for the nationalist as contrasted to the assimilationist.

Examining the effects of EC/FC company names and the international French/Popular FC accents assumed by the announcer in the radio ads on the preferences for "Calmine" and "Presto", fictitious brands of analgesics and instant coffee, respectively, called for ANOVAs. As there is no reason to believe that the factors affected the cell sizes, a fixed effects-unequal cells model was used (Winer 1971). Two series of six ANOVAs (3 types, assimilationist, nationalist and mild nationalist x 2 products, "Calmine" and "Presto") were run, first on the differences between the pre and post treatment measures of preferences for "Calmine" and "Presto", second on the post only preference measures. Of the 12 ANOVAs, only five showed an effect, main or interaction, significant at or beyond the .10 level.

For the nationalists there is a significant main effect (.01 level) of company names on their post only preference scores for "Calmine" in the hypothesized direction: they prefer "Calmine" more when manufactured by an FC than by an EC company. In contrast, as expected, there is a main effect of accent (.005 level) for the assimilationists who change their preference for "Calmine" positively when advertised with an international French accent and, negatively when advertised with a popular French accent.

We would expect the mild nationalists to resemble the nationalists in their preferences for ethnic goods. They do not. There is a main effect of accent on the

pre/post treatment change in preferences (.07 level) and on the post-only preference (.07 level), both for "Calmine". The direction of the effects, however, is in the direction opposed to expectation: the international French accent entails increased and positive preference for "Calmine" as compared to the popular FC accent. Further, there is a significant interaction effect of company names and accents on the post-only preferences for "Presto". Looking at the simple effects (both significant at the .01 level); a) with the EC company name, the mild nationalists prefer "Presto" advertised with the international as compared to the popular FC accent; b) with the FC company name, they prefer "Presto" advertised with the popular FC as compared to the international French accent. It is as if the mild nationalist expects the FC company to "speak" popular FC (otherwise it would be perceived as a turncoat?) and the EC company to "speak" international French and not popular FC (otherwise intention to persuade would become obvious?). Thus, hypotheses 2 and 3 receive further, though weaker, support from the experimental part of the study.

That many expected effects did not occur could be due to a weakness in the experimental design. There are only 19 nationalists in the sample. They are spread too thinly among classes and therefore treatment combinations for many significant effects to emerge in the analysis. However, this argument cannot explain away the quasi absence of significant effects among the 64 assimilationists in the sample or the ambivalent but frequent results for the 57 mild nationalists. It could be that nationalists, more involved than assimilationists with their ethnicity, are more apt to perceive ethnic cues and react to them. Further, most of the significant effects are the result of the accents, even though they did not differ much. Could it be that FCs are more sensitive to language styles, the "trait that sets them apart", than to company origin?

Summary of Findings

In summary, the two central types - nationalists/mild nationalists and the opposite assimilationists - are recovered empirically, as hypothesized. They account for 140 out of the 169 subjects classified. Hypothesis 1 receives strong support. For the woolen hats, nationalists/mild nationalists do prefer FC to EC symbols, as expected. In their reactions to the company names and accents of radio ads for "Presto" and "Calmine", the nationalists prefer FC to EC company names and the assimilationist prefers the international French to the popular FC accent. Some effects expected of the assimilationists do not appear empirically. Contrary to expectation, the mild nationalists downrate the popular FC as compared to the international French accent. Thus, hypotheses 2 and 3 receive support but not as strong as for hypothesis 1.

Conclusions and Suggestions for Future Research

First, the findings suggest that limited conditions, the FC market may be fruitfully segmented between nationalists and assimilationists when ethnic symbols are either present in, or attached to, products via advertising. Several studies provide evidence for the equivalent opposed two types among other minorities: Blacks (Bauer, Cunningham and Wortzel 1965, Bauer and Cunningham 1970), Hispanics (O'Guinn and Faber 1985), Chinese (Ellis et. al. 1985) and Jews (Hirshman 1981). A two type typology, consisting of the two central types, may be sufficient to depict most MI responses. This finding may be valid across minorities.

Second, it follows that in comparative studies which seek to attribute differences in consumption patterns between two ethnic groups to their differing ethnicity, the researcher will need to adopt a heterogeneous view of both the MG and the DG. Besides other confounding factors (e. g., family size, income, social class),

the investigator should control for the ethnic identifications of his respondents. For instance, a sample of FCs made up exclusively of assimilationists would appear, falsely, to resemble the sample of ECs to which it is compared. Symetrically, some ECs are not immune to adopting some FC ways (McDonald 1971).

Last, if the typology has received some measure of cross-subcultural validity, it remains of limited usefulness as a construct mediating the preferences of MIs for ethnic goods and consequently as a basis for segmentation of ethnic MG. If some, and only some, of the present findings are statistically significant, they do not reach the threshold of being managerially actionable. This may be due to shortcomings of the study. We focus on those which bear suggestions for future research.

Suggestions for Future Research

The model tested here requires modifications and further testing. First, it presumes the stability of each type mediating stable isomorphic preferences for ethnic goods. Are MI responses, or ethnic identifications, stable individual predispositions expressed regularly across many roles? Or, on the contrary, are they driven by circumstances? For instance, French-canadianness would be freely exhibited at home while English-canadianness would be channelled to the realm of work? Alternatively, as dual ethnic identifications with DG and MG may be a source of conflict for many MIs, this conflict may result in unstable preferences or avoidance of choice objects involving ethnic symbols. Negative identification may provide an unclear prescription for overt behaviors. The multiplicity of identifications of a MI may include other non-ethnic subcultures. How would identification with the youth subculture interact with ethnicity? These are questions for future research.

More radically, some argue that ethnicity has but a negligible influence on consumer behavior when compared to environmental circumstances (Thorelli 1985) while others contend that it has a pervasive influence (Hirshman 1981). Rather than take position for one of the two extremes, future research needs to identify the circumstances, obviously restricted, under which ethnic identifications, or MI responses, will have a major influence on which aspects of consumer behavior. There is evidence that ethnicity may influence other mediating processes (Hirshman 1982, Muller 1985). The present study shows it influences preferences for ethnic goods. The evidence suggests some of the circumstances under which MIs responses could prove to be a major factor in the choice of ethnic goods. Ethnic goods would be socially consumed, exhibit shared symbolic ethnic meanings, all competing brands would perform equally well on all other important attributes (woolen hats; the cigarette brand "La Quebecoise" failed because its taste displeased smokers), non utilitarian products, (Hirshman 1986), for which tangible aspects do not dominate (the results were better for woolen hats than the analgesic), would have been the object of successful ethnic advertising (it was not the case for analgesics or instant coffees) and, last, perceived even more so ethnic by individuals ego-involved with their ethnicity. Beyond the results of this study, some "goods" may be ethnic even in their core benefits (voting choices) and tangible attributes (package written in French). Before looking further into the determinants of expressing identification with the MG an/or the DG, future research needs to circumscribe and inventory the aspects of consumer behavior, dependent variables, that are saliently ethnic. Toward that goal, the present results outline an initial definition of ethnic goods.

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THREE CONSUMER BEHAVIOR STUDIES AND THEIR IMPLICATIONS FOR MARKETING COMMUNICATIONS

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Abstract

All three papers in this session have potentially important implications for advertising and promotion. Suggestions are offered for improving the papers; and, in most instances, this involves deleting irrelevant issues or terminologies from the discussion. A model is proposed to synthesize these papers, and some possible directions for future research are explored.

Introduction

One common theme which ties three studies in this session together is that all three papers have been designed to explore some aspect of promotion, and all three have important implications for marketing communications. For example, the Schindler et al. (1987) paper has implications for point of purchase displays and packaging. The Grossbart et al. (1987) work has implications for designing claims for television commercials; and the Stern (1987) paper has several advertising implications, including stereotypes in advertising and factors contributing to advertising recall.

Individually, each of the papers has particular strengths, and each makes a contribution. However, each of the papers contains components which may not be necessary. In some cases, the papers could be strengthened if certain excess baggage were left out. Specifically, I think that the authors sometimes invoke theories or terminologies which aren't directly relevant to their purpose. This point will be elaborated as the discussion proceeds.

Schindler et al.: Quick Choice Among Similar Alternatives

This paper has implications for a very important topic in promotion that often receives little research attention: point of purchase displays. At present we know surprisingly little about how consumers make quick choices under time pressure.

The method employed in this study is very ingenious. The lottery technique using a bingo drum is pioneered by these authors and may have interesting applications to other problems in consumer behavior research. The results which are obtained are in the expected direction, and consequently the authors contribute to our limited knowledge in this promotional area. Two suggestions are offered here for those who continue research on this important topic. The first suggestion concerns the experimental procedure itself, and the second concerns the relative advantages/disadvantages of laboratory versus field experiments.

Experimental Procedure and Materials

Schindler et al. show examples of their bingo cards in their figure. As shown in the figure, all cards are numbered sequentially from 1 to n (where $n = 4, 25, \text{ or } 100$). It seems to me that it might be better to randomly assign the numbers to the bingo cards, rather than numbering sequentially. This random assignment would increase the difficulty of respondents' information processing task, and this is the key experimental manipulation. It is important that respondents reach the limits of their processing ability if the theoretical model proposed by Schindler et al. is to apply. The way the numbers are currently ordered on the grid, respondents can instantly remember where all the numbers are, due to a chunking effect. Thus the typical respondent, upon being exposed to the sequentially numbered bingo card for 5 seconds, could perfectly reproduce the card.

At the beginning of the Schindler et al. paper is a fairly

detailed discussion of consumer information processing limitations and the notion that consumers can store only about 7 items in an evoked set. Here, the classic Miller (1956) article is invoked concerning the magical number 7, plus or minus 2. Unfortunately, none of this discussion is relevant given the particular experimental procedure. Because of chunking effect, a typical respondent can remember the entire bingo grid. It is not necessary for a respondent to remember every single number, since the numbers are all in order.

Thus, for this paper, it might be better to leave out the notion of information processing limitations. I'd be interested in seeing future results from this procedure when the numbers are randomly assigned to the bingo cells so as to eliminate the possibility of a chunking effect.

Laboratory Versus Field Experiments

In this particular study, Schindler et al. conduct a laboratory experiment which offers fairly high internal validity but at the cost of low external validity. The authors would, I think, agree that there is some distance between their experimental conditions and actual consumer purchases.

It would be interesting to test the research hypotheses in a more naturalistic setting. Two possibilities come immediately to mind. First, a simulated store could be established and consumer choices observed under time pressure. Alternatively, a field experiment could be run at the check-out counter of a cooperating grocery store. The salience of various candy bar packages could be manipulated (by creating different color packages), and the effects on sales could be monitored through electronic scanner data. Another possible salience manipulation could be set up by distinguishing high salience portions of the candy display rack (e.g., some candy bars are displayed precisely at eye level). Of course it would be essential to pretest either the candy wrapper colors or the section of the display rack in order to insure that the salience manipulation was effective.

One of the main contributions of the Schindler et al. work is that it brings an important theoretical perspective to bear upon the issue of consumer purchase of impulse or convenience items. If this theoretical framework could be linked to some of the important shelf space experiments conducted in previous years (see for example Cox 1964, 1970), then we might begin to understand something about how consumers make quick choices from a set of similar alternatives.

Grossbart et al.: Brand Commitment

The Grossbart et al. paper examines an important question in advertising research: what type of claims are the most effective for television commercials? Here, two types of claims are considered: objective and subjective. The authors go to the trouble of creating and producing two TV commercials to fit their particular definitions of objective/subjective claims. It is no easy task in advertising research to create advertising stimuli that elicit from respondents just the manipulation that fits the research objective. Here, the authors seem to have done a complete job; and, for the most part, these objective and subjective claim manipulations seem to be successful.

One aspect of this paper which does appear troubling is the whole concept of "commitment." It's true that the authors didn't coin the term "commitment." Commitment is a proposition developed in psychology, and there have been

some marketing studies that have used the term. As discussed here, however, it's not clear how the authors intend to differentiate commitment from other related concepts, such as: different notions of involvement (e.g. task involvement, brand involvement), brand loyalty, or brand experience. It would be helpful if the authors could offer specific definitions for all of these terms. As the paper is currently written, the authors mention some of these overlapping terms but never precisely define how they would be different/similar from one another. Unfortunately, this lack of clarity about what commitment is occurs at both the theoretical level and at the measurement level.

Admittedly, this semantic and measurement confusion is not easy to clear up in consumer behavior research. At this stage of development, we don't exactly know how involvement, brand loyalty, and product experience are related. The authors do offer some discussion of these different constructs, but I don't think that the problem is solved by lumping all of these processes together and calling the group of them "brand commitment."

It is understandable that the authors would not want to use more laden words to describe their research, such as "brand loyalty" or "involvement." Both of these terms seem to have many competing definitions and measures. But again, the problem is not solved by giving the whole phenomenon a new name. To summarize, this paper might have been stronger if this whole notion of "brand commitment" were left out and more traditional terminology (e.g., brand loyalty) substituted in its place.

In terms of results and implications, the authors do a fairly good job of summarizing some limitations of their research design. Specifically, they studied a fictitious brand using only two attributes. Their subjects were all students in an atypical viewing environment. These are all common problems/limitations in advertising research.

Aside from these considerations, the results themselves are rather weak. Hypothesis two is not supported. There is only partial support for hypothesis one, and hypothesis three is supported at the .1 level of significance. In brief, there is almost no variance explained in the criterion (attitudes). Given these weak results and the limitations, it is rather difficult to draw meaningful managerial recommendations or conclusions from the study.

Stern: Gender Research

There are many positive aspects of the Stern paper. The review of gender research is well done, and this review provides a valuable synthesis of marketing and non-marketing literature. The discussion of symbols and imagery is interesting, and the advertising examples add to the paper. Since this is largely a theoretical piece, it is interesting to speculate whether or not the author plans any empirical work to test the hypotheses which she so carefully develops. If so, what would be the nature of this empirical work? From the material which is presented, it's not exactly clear what empirical directions would be the most promising. Aside from this issue, there are two other unanswered questions: 1) which is more important for consumer researchers to study, the biological sex of the respondent or sex-role self-concept (the psychological world of gender)? 2) what has services marketing got to do with all of this?

Biological Versus Psychological Gender

At the outset of the paper, the author mentions that biological sex (as opposed to sex-role self-concept) has proved to be the more important predictor in marketing-oriented research. Also, the author discusses at length some of the controversies and problems which have beset psychosexual research. Despite this, however, the bulk of the paper concentrates upon the psychosexual dimension. All the hypotheses and rationales for hypotheses concentrate and depend upon psychological explanations. Thus, the reader is left with an unanswered question: which is most important/useful for consumer researchers to consider,

biological or psychological gender?

Services/Product Dichotomy

The distinction between services marketing and product marketing provides a useful and interesting framework for thinking about consumer research. However, in this particular instance, I'm not certain that it is so useful or relevant to all areas of gender research. For example, hypothesis 5 essentially says that gender (and gender changes over time) can be important segmentation variables. It's not necessary to invoke the product/services dichotomy to justify that conclusion. In developing H5, Stern's logic proceeds as follows: Services managers are very interested in managing demand; gender differences cause changes in demand patterns; therefore, services managers should be very interested in gender research. Obviously, there are a large number of factors (beyond gender differences) which could potentially influence demand patterns.

The same sorts of problems appear in the development of other hypotheses. For example, there's a discussion of production variability for services, and this discussion is used to justify a hypothesis about stereotypes in advertising (H3). Again the specific connection to services marketing is unclear since sex-role stereotypes in advertising have more to do with imagery (or other factors) than with the production variability of service marketing.

In summary, Stern describes an interesting set of hypotheses, most of which are directly derived from a thorough review of the gender literature. It appears, however, that most of the references to services marketing could be dropped, and still we would be left with the same set of hypotheses. Thus, this paper could be improved by eliminating most allusions to the services/product dichotomy and instead concentrating upon the findings and theories forthcoming from research on gender differences.

Synthesis and Summary

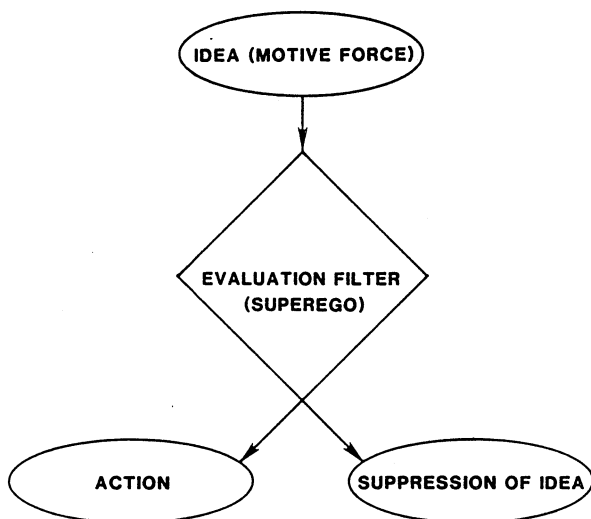
One potential task for a discussant is to provide an overall framework to unite the studies in a particular session. Fortunately for this discussant, Robert Schindler provided such a framework in the course of the session, and his model is displayed in Figure A. This model proposes that ideas are the motive forces behind consumer behavior. As ideas come to prominence in the mind, they are evaluated by a filter (similar to Freud's notion of superego). Those ideas which are approved by the filter are then put into action (and result in a consumer behavior). Those ideas which don't pass the filter are suppressed or forgotten or else some action is taken to remove those ideas from consciousness. This framework is attractive since it is consistent with existing psychological theories (e.g., Freudian) and since it provides a simple explanation for many of the "automatic" behaviors which we study in marketing/consumer behavior. For example, Figure A provides a complete description of the manner in which a consumer responds to a point of purchase (POP) display in a grocery store. The POP display triggers an idea (brand awareness, perhaps). Next, this idea is passed through a filter (e.g., "have I purchased this brand previously? If so, did I like it, can I afford it?"). If the idea can pass through this screening process, it becomes the motive force for action (the consumer purchases the POP brand). Otherwise, the POP display is promptly forgotten, and the consumer moves on to the next shopping decision.

Of course, the Figure A model is not necessarily appropriate for all types of consumer behavior. It would not be adequate for explaining behavior which results from a complex choice process (e.g., purchasing a new automobile). Nevertheless, this model is quite attractive for explaining routine response behavior or impulse buying or shopping for convenience goods.

In addition, this Figure A model provides an interesting framework for thinking about the three papers in this

session. As already described, the model works quite well for explaining how consumers might react to attention-getting devices in the store and, as such, provides a parsimonious explanation for the Schindler et al. results. The Grossbart et al. study concentrates on commitment (or brand loyalty). In terms of the Figure A model, brand loyalty could serve as an important consumer filtering device. For example, the consumer may ask (either subconsciously or consciously): "Is this the brand I usually buy?" Only by passing this filter can the advertising message have an effect and result in purchase behavior. Likewise, consumer ideas (or even consumer evaluation filters) may vary depending upon biological or psychological gender. In this respect, the Figure A model provides a useful perspective for thinking about the Stern hypotheses.

FIGURE A
PROPOSED EXPLANATION FOR
ROUTINE RESPONSE BEHAVIOR



As mentioned at the outset, the common theme which unites these three studies is that all three have implications for marketing promotions. To date, relatively little work has been done on point of purchase displays (see Schindler et al.). In contrast, there are quite a few studies on advertising effects (see Grossbart et al. and Stern). Perhaps it is time in consumer research that we begin to study how some of these promotional devices interact. For example, some interesting experiments could be designed to explore how advertising and POP displays work together to influence choice behavior. As suggested by other speakers at this conference, consumer behavior research may be able to contribute to marketing knowledge by widening its frame of reference, by considering together variables which previously have been studied only in isolation. The framework outlined in Figure A provides one approach for organizing and guiding such a comprehensive investigation of marketing communications.

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HOW AN ATTENTION-GETTING DEVICE CAN AFFECT
QUICK CHOICE AMONG SIMILAR ALTERNATIVES

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Abstract

Marketers have often been successful at using displays, unusual packaging, and other attention-getting devices to influence consumers when they make a quick choice from among a set of similar alternatives. An experiment involving a series of lotteries provides evidence that at least some of this influence is due to consumers' information-processing limitations. Although this component of the influence occurs only as the number of similar alternatives exceeds seven, it should result from any device which draws the consumer's attention to a particular alternative.

Introduction

Consumers are often faced with a situation where they must make a quick choice from a crowded market category where they have little basis for deciding among the many alternatives. The epitome of such a situation occurs when a consumer is looking through the Yellow Pages for, say, a furniture store or an insurance agent. Usually, there will be a very large number of alternatives and the consumer may have little basis for deciding which store or agency to call first. Other examples of such choice situations occur when a consumer chooses among numerous brands of, say, paper towels on a supermarket shelf, or when a driver picks a place to eat from the many restaurants lining the highway.

A common strategy marketers use to influence such situations is to do something to make their alternative catch the consumer's attention, or otherwise stand out perceptually from the other alternatives. For example, a roadside dairy restaurant might display a lifesize model of a cow, or an Italian food restaurant could have the "leaning tower of Pizza" in front of its entrance. In a supermarket, a brand of soap pads might use a package of iridescent orange, or a brand of paper towels might arrange special signage or an end-aisle display. And in the Yellow Pages, an insurance agency may invest in a half-page ad where most of the space is devoted to displaying the agency name and phone number in large print.

Research indicates that such marketing techniques are effective in influencing consumer choice. There have been reports both in the trade press and the academic journals of the effectiveness of supermarket displays (Chevalier 1975; Curhan 1974; Progressive Grocer 1971) and of signs and other attention-getting materials at point-of-purchase (McKinnon, Kelly, and Robison 1981; Progressive Grocer 1977; Woodside and Waddle 1975). In an investigation of the consumer's responses to Yellow Pages advertising, Feldman and Halterman (1963) found that when consumers were asked to select the first drug-gist or plumber they would call from an unfamiliar phone book, they were 23 times more likely to choose a phone number displayed in an advertisement than one in an ordinary column listing. Further, the existence of this salience effect has also been demonstrated in a laboratory situation. Using a simple lottery task, Schindler and Berbaum (1983) found that subjects were more likely to choose a perceptually salient alternative, even though the payoffs of the choice were determined by a demonstrably random process.

If it is indeed the case that many common marketing

techniques work by making one store name or package stand out perceptually from the array of competitors, then understanding the psychological mechanisms by which this perceptual salience can influence choice could lead to more effective use of these marketing techniques. As a first step toward understanding these mechanisms, the factors which could cause this salience effect can be grouped into two general categories.

The first category of factors includes those where the situational meaning which is ascribed to a salient alternative mediates the effect of salience on choice. For example, McKinnon, Kelly, and Robison (1981) hypothesize effects of point-of-purchase signage which are due to the price or benefit messages which are explicitly communicated by the signs. And it is also possible, as Chevalier (1975) suggests, that end-aisle displays may increase sales simply because consumers interpret them as indicating a special bargain. Or, concerning the Schindler and Berbaum (1983) experiment, the subjects may have interpreted salience (incorrectly) to be an indication of an alternative with a greater likelihood of payoff. In any particular marketing situation, consumers may or may not give salience a meaning which will lead to selection of the perceptually salient alternative. But if such situational meanings are the only factors responsible for the effects of salience on choice, then the decision whether to try to make an alternative stand out from the others should be based entirely on an estimate of the meaning the relevant consumers are likely to ascribe to a salient alternative in that particular situation.

On the other hand, a second category of factors which could cause more frequent choice of salient alternatives includes those which involve the consumer's information processing limitations. Such limitations cause consumers to consciously perceive only a small portion of the information which reaches their senses (McGuire 1976, pp. 305-6). In particular, Miller (1956) reviewed evidence suggesting that these limits prevent a person from keeping in mind more than about seven items at any one time. This information processing limitation implies that consumers who are trying to choose among a large number of alternatives will not be able to keep the alternatives simultaneously in mind so they can be compared unless they simplify the situation by limiting consideration to an "evoked set" of approximately seven or fewer alternatives (Howard and Sheth 1969, pp. 98-99). Parkinson and Reilly (1979) proposed that selection into this evoked set occurs by consumers considering the alternatives one at a time, presumably until the evoked set becomes filled. If there are important differences between the alternatives, then these differences will be used to reject alternatives from the evoked set. But if the consumer regards the alternatives as similar, then there will be little basis for rejecting an alternative from the evoked set, and the evoked set will tend to fill up with the first seven or so alternatives perceived. Thus, if an attention-getting device causes one of these otherwise similar alternatives to be thrust into consciousness ahead of the others, it will have a very great likelihood of being included in the consumer's evoked set. This greater likelihood of being in the evoked set would, of course, result in the salient alternative having a greater than chance likelihood of being the final choice.

The present study was designed to determine whether situational meanings are sufficient to account for the effect of salience on choice or if a component concerning human information processing limitations also plays a role. Since such information processing limitations are thought to be relatively constant across people and situations, this component of salience effects would occur no matter how consumers interpret the salience. Of course, since consumers usually will have an interpretation of or a feeling about the attention-getting device, it is possible that this interpretation may be so negative that it outweighs the effects of processing-limitation factors.

The study involved measuring the effect of salience on choice using the lottery technique of Schindler and Berbaum (1983). This technique was designed to simplify the situational context by using numbers as alternatives and by using a simple darkening or lightening of a number as the attention-getting device. In addition, an explicitly random process (a "bingo drum") was used to select the winning numbers, so as to make it clear that the salient number did not have a greater chance than any other number of being the winning number.

The three experimental conditions differed only in the number of alternatives involved in each choice. In the first condition, one alternative stood out in a field of four alternatives; in the second condition, one alternative stood out in a field of 25; and in the third condition, one alternative stood out in a field of 100 alternatives. Since the meaning that the subjects of the study ascribe to a salient alternative should not be affected by the number of alternatives, the size of the salience effects found should not differ between the three conditions if only the situational meaning factors are involved. However, if the effect of salience on choice is based on a high likelihood that the salient alternative will be included in the evoked set, then there should be different effects of salience in each of the three conditions. There should be no effect of salience in the four-alternative choices since this number is well within short-term memory capacity and thus all four alternatives can be considered. In the 25-alternative choices, salience should increase the probability of an alternative being chosen from 1/25 to around 1/7, under the assumption that the subjects' idiosyncratic strategies for choosing from the evoked set will result in each evoked set member having an equal chance of being the final choice. An even larger bias toward the salient alternative would be expected in the 100-alternative choices since the high likelihood of the salient alternative being included in the evoked set would give it an approximately 1/7 chance of being chosen while its probability of being chosen without the effects of salience would be only 1/100. The finding of such differences in the size of the salience effects between the three experimental conditions would provide evidence that information processing limitations play a role in causing these salience effects.

Method

Subjects

Eighty-four university undergraduates served as subjects in this study in return for credit toward a course requirement. The students were run in groups of approximately 15. In each group, small prizes were awarded to the winners of each round.

Materials

Each subject received a booklet containing three sets of 25 pages, each set separated by a green sheet of paper. A cover sheet displayed the lottery game's name, "Mark-It."

On each of the sheets in a set was printed a matrix of

square boxes with each box containing a number. One number on each page was made salient by being solid black in a field of outlined numbers of the same size and typeface. The previous finding (Schindler & Berbaum 1983) that matrices with a single black number in a field of outlined numbers and matrices with a single outlined number in a field of black numbers produced similar results made it unnecessary to use both types of matrix in this study. Of the three 25-page sets in a booklet, one contained 2x2 matrices (the four-alternative condition), one contained 5x5 matrices (the 25-alternative condition), and one contained 10x10 matrices (the 100-alternative condition). An example of each size matrix can be seen in the Figure.

FIGURE

EXAMPLES OF (A) THE 4-ALTERNATIVE MATRIX, (B) THE 25-ALTERNATIVE MATRIX, AND (C) THE 100-ALTERNATIVE MATRIX

1	2
3	4

A

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

B

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	79	80	
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

C

For each size matrix a different method was used to determine the salient numbers. In the set of four-alternative matrices, a randomly chosen one of the four numbers was salient on seven of the 25 pages in the set, while each of the other three numbers was the salient one on six of the pages. In the set of 25-alternative matrices, each number was the salient one on one of the 25 pages in the set. In the set of 100-alternative matrices, 25 numbers were chosen randomly (without replacement) to serve as the salient ones.

The order of the pages was randomized separately for each of the matrix sets. Also, the order of the three sets in a booklet was randomized separately for each group of subjects.

Procedure

The subjects were told that "Mark-It" was a game in which prizes would be awarded by random drawing, and then the rules of the game were carefully explained (See Appendix). When the experimenter told the subjects to begin, each subject began selecting one number on each page by drawing a line directly through that number. The experimenter paced the subjects orally, allowing them about five seconds to choose a number and turn the page. This was done to encourage the subjects to make the kind of quick decision they might make, say, when choosing a brand of paper towels at the supermarket rather than to try to develop some overly elaborate strategy for this particular game situation.

After completing a set of 25 sheets, the subjects turned back to the first page in that set. The experimenter then rolled a wire bingo drum filled with numbered balls and randomly selected one number that appeared in the preceding matrices. The experimenter called out that number and any subject who had marked the called number on the first sheet in the set received a point. Then the subjects turned to the second page and the procedure was repeated. This continued until two subjects had received enough points to win and receive a prize (for the four-alternative sets, four points were needed to win; in the 25-alternative sets, two points were needed; in the 100-alternative sets only one point was needed). This entire sequence was then completed for the other two sets in the booklet. After the entire booklet was marked, the subjects were asked to complete a questionnaire containing open-ended questions about the strategies they had used in the game.

Results

The number of salient alternatives chosen by a subject was computed separately for each of the three 25-page sets. The mean number of salient alternatives chosen and the number of salient alternatives which would be chosen due to chance alone are displayed in the Table. In the four-alternative choices the average number of

TABLE

MEAN NUMBER OF SALIENT ALTERNATIVES CHOSEN AND THE NUMBER OF SALIENT CHOICES WHICH WOULD BE EXPECTED BY CHANCE ALONE FOR EACH OF THE THREE CHOICE SITUATIONS.

	4-Alternative Matrices	25-Alternative Matrices	100-Alternative Matrices
Mean number of salient alternatives chosen	6.98	2.44	2.57
Number of salient choices predicted by chance alone	6.25	1.00	0.25

times a subject chose the salient alternative did not differ significantly from the number of times any one alternative would be chosen by chance alone ($t(83) = 1.54, p > .10$). However, in the 25-alternative choices, salience increased the chances of an alternative being chosen from 1/25 to about 1/10 ($t(83) = 3.13, p < .005$). In the 100-alternative choices, salience increased an alternative's chances of being chosen from 1/100 to about 1/10 ($t(83) = 3.52, p < .001$). The salience effect for the 100-alternative choices was greater than that for the 25-alternative choices because while the chance probability of choosing any one number in the 100-alternative matrices was one-fourth that of the 25-alternative matrices, the average number of times the salient alternative was chosen in the two conditions did not differ significantly ($t(83) = 0.33, n.s.$).

A tally of responses to the open-ended questionnaire items indicated that while 63% of the subjects used the words "random," "haphazard," or "by chance" to describe how they made their choices, 30% did report strategies which involved at least sometimes choosing the darkened square. (e.g., "sometimes I picked the darkened number and sometimes I didn't"). However, these strategies were not based on the belief that the darkened squares had a greater than chance likelihood of being chosen. When asked directly about the relative chances of each number being chosen, not one subject reported believing that the darkened numbers had any greater likelihood of being the winning number.

When asked directly what they felt about the darkened number, only eight subjects (10%) wrote that they felt that the experimenter had expected them to mark that number. And of the eight, six reported that their choices were guided by strategies which had nothing to do with these expectations.

Discussion

The pattern of results in the experiment supports the view that information processing limitations play a role in causing salience effects. When the choice was among four alternatives, all four could be considered and thus there was no consequence of salience causing an alternative to be considered first. However, when the choice was among 25 or 100 alternatives, most of the alternatives could not be considered. In these choices, the ability of salience to thrust an alternative into consciousness insured consideration of the salient alternatives and thus gave the salient alternative a greater-than-chance probability of being chosen.

It could be argued, however, that there are other explanations which could account for the pattern of results. One possibility is that the subjects adopted the strategy of picking at least some salient numbers in each matrix set, just in case they are more likely to be the winning numbers. The failure of direct post-experimental questioning to turn up even one subject who reported believing that salient alternatives were more likely to win makes this possibility quite unlikely. Another possibility is that the salience effects in the 25- and 100- alternative matrices are due to experimental demand effects (e.g., Sawyer 1975). Again, the results of the direct questioning render this alternative unlikely. Further, it is unclear why a desire to conform to the experimenter's expectations would cause a bias toward the salient alternative in the 25- and 100-alternative matrices but not in the 4-alternative matrix.

The finding that the probability of the salient alternative being chosen was about the same in the 100-alternative matrix as it was in the 25-alternative matrix is also consistent with the view that the subjects were bumping up against their processing limitations in those matrices. The finding that the salient alternative was chosen an average of once every ten choices in those

matrices suggests an evoked set size of around ten alternatives. This is larger than Miller's (1956) estimate of the span of short-term memory and is larger than evoked set sizes found in previous research (e.g., Jarvis and Wilcox 1973; Ostlund 1973). However, Cavanagh (1972) found that the number of items which could be simultaneously maintained in short-term memory increased as the size and complexity of the items decreased. And, from examining the pattern of findings in evoked set research, Horton (1983, p. 76) concluded that the size of the evoked set increases as the complexity of the comparisons between the items decreases. Thus, the large evoked set size indicated by the present results fits very well with the quite minimal comparisons the subjects are likely to make between alternative numbers in a lottery task.

The support in this study for a processing-limitation component of salience effects suggests to the marketing practitioner that,

- (1) displays and other attention-getting devices are especially appropriate in situations where consumers must choose among a large number of poorly differentiated alternatives, and,
- (2) an attention-getting device can have a substantial effect on sales even if it fails to have any relevant meaning to the consumer.

Furthermore, the present viewpoint raises the possibility that the processing-limitation component of the salience effect can occur also as a result of making a brand salient long before choicetime. An item which stands out in an array is more likely to be recalled than any one of the nonsalient items in the array (the "Von Restorff Effect"; e.g. Wallace 1965; Rundus 1971). If an especially attention-getting advertisement makes an item (e.g. a product type, brand, store, etc.) stand out from among its competitors, then the item will be easier to recall at the time when a choice must be made. This increased long-term memory accessibility will cause the item to be one of the first to come to mind, therefore making it virtually certain to be one of the small number of alternatives considered. Thus, whether the salience of an item acts directly or acts by increasing the accessibility of an item's memory trace, at least one component of its effect on sales may be its ability to capture a share of the limited processing capacity of short-term memory.

Appendix

Instructions to Subjects

We'd like you to play a game called Mark-It. This game involves giving out some prizes based on a random drawing. It is very simple to play.

When I tell you to begin, turn to the first page [show a page]. Choose one of the numbers on the page and mark that number by drawing a line directly through it. Choose any number you want, but please choose only one per page. Then, when I tell you to turn the page, go to the next page and repeat this procedure. We will continue like this through the pages of the booklet until we come to the green page. Then we will stop and see who's won the round.

Here's how we'll determine who wins a round: We'll turn back to the first page and turn this drum to pick a number at random. There will be as many balls in the drum as there are numbers on the page and the selection of a number will be totally random. If the number we pick is the same as the number that you marked, then you get one point. We will then turn to the next page and will again pick a number at random. If this number is the same as the number you marked on the second page, then you get a point. We will continue this procedure until two of you have received enough points to win the round. (We will tell you how many points are necessary to win

before we begin a round.) We will play three rounds of Mark-It today, so we will be giving out at least six prizes.

Please note that this drum allows us to draw the numbers totally at random [demonstrate the bingo drum]. If you would like to be assured that this apparatus is indeed giving us a fair drawing, you are welcome to come up and examine the drum and the numbered balls inside.

Any questions?

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INFLUENCE OF BRAND COMMITMENT AND CLAIM STRATEGY ON CONSUMER ATTITUDES

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Abstract

Results indicate effects of alternative claim strategies depend on brand commitment. Consumers with higher levels of commitment are more positively influenced by a combination of objective and subjective claims than by subjective claims alone. In contrast, less committed persons are equally influenced by either type of claim strategy. Subjective claims have a similar impact on consumers, regardless of their commitment level. Exposure to a combination of objective and subjective claims produces more positive attitudinal effects only among more highly committed consumers.

Introduction

In recent years researchers have become increasingly interested in consumer commitment. While the commitment construct is often studied and discussed within the context of consumer involvement (see, e.g., Lastovicka and Gardner 1979), several authors (including Traylor 1981, 1984; Crosby and Taylor 1983) have suggested it deserves separate attention. This paper provides a brief overview of the commitment construct and its application to consumer behavior and reports results of a study investigating the influence of two advertising message claim strategies on consumers with different levels of brand commitment. The research and managerial implications of these findings are also discussed.

Theoretical Background

The construct has been employed to support the notion of a "behavior -- attitude" relationship (Kiesler 1971). Commitment theory was proposed as one of a number of explanations for why individuals formulate attitudes which are consistent with their behaviors (dissonance theory being another). Commitment is also often linked to discussions about involvement with objects, social questions, political matters, etc. However, there is an important distinction between these two concepts.

For example, while the notion of involvement encompasses the perceived personal importance or relevance of entire issues, commitment applies to the stance that an individual might take with respect to a given issue. In a marketing context, this suggests product involvement reflects the personal relevance of an entire product class (Lastovicka and Gardner, 1979), while commitment relates to consumer dispositions toward a particular brand (Traylor 1981; 1984). For example, a consumer may be involved with the product class of sports cars and committed to Porsches but not Volvos. Thus, commitment and involvement are distinct but related constructs (Muncy and Hunt 1984).

Commitment has been defined as the pledging or binding of an individual to a behavioral act (Kiesler 1971). That is, given that an individual has performed some behavioral act (e.g., purchased a particular brand), s/he is likely to formulate favorable attitudes toward that act. Kiesler's reasoning suggests that after an individual performs an act, s/he is accountable for it. Consequently, her/his resulting attitudes tend to be in concordance with this previous behavior. The more committed the individual, the less likely s/he will be to "dispense" with the resulting attitude.

However, Kiesler considers commitment to be more than an extreme attitude. He suggests commitment also implies an individual is familiar with the issue at hand and

will socially support her/his position. This suggests that "committed" individuals are knowledgeable about an issue and behaviorally reflect their commitment by advocating their stance in the presence of others. Consequently, commitment is apt to lead an individual to change her/his attitudes to be consistent with behavior, act in a fairly consistent manner, and resist attitude change efforts when her/his position is attacked.

In a marketing context (Lastovicka and Gardner 1979), commitment is considered to be a clear preference for one or more brands in a product class and is evidenced in beliefs about the product category and concern about brand selection. In this view, consumers are presumed to have some reasonable level of knowledge of alternatives, believe there are meaningful differences between these alternatives and place importance on whether their preferred brand(s) are available for selection. Consequently, commitment might be expected to manifest itself in strongly held attitudes toward brands consumers have purchased, positive dispositions to repurchase and resistance to advertisers' attempts to shift loyalties. Thus, a marketer who has a large number of consumers committed to her/his brand is in an advantageous position.

The literature on commitment in the marketing discipline suggests highly committed individuals: fix the "committed to" brand(s) as the only acceptable choice(s) within a product class (Traylor 1981, 1984), resist other brands' influence attempts (Traylor 1981, 1984), selectively perceive information which is consistent with their pre-election preferences when making post-election evaluations of their voting behavior (Crosby and Taylor 1983), and assimilate their pre-trial expectations in their post-trial brand evaluations (Keon and Kamins 1985). These studies, in the Kiesler (1971) tradition, have focused on the effects of attacks on attitudes toward the "committed-to" brand. Their findings suggest consumers committed to a particular brand are likely to maintain strongly held attitudes toward that brand. By implication, it is also suggested they are resistant to the promotional efforts of other brands. Thus, marketers competing with a brand which has a large number of committed consumers are in a difficult position since their persuasive efforts are expected to have little or no impact on these individuals.

Kiesler's findings also suggest committed individuals are likely to resist "attacks" on their position. His experiments typically involve the presentation of a document which directly attacks the subject's position on an issue. (For example, a flyer was sent to women "committed" to the notion of providing teenagers with birth control information which included a boldly printed headline which read, "birth control information for our teenagers? -- NO!"). In a marketing context, such attacks are likely to occur in the form of comparative ads. McDougall (1978) has studied the effects of ads which suggest a competitive brand is superior (with respect to a salient attribute) to the subject's "loyal" brand. As would be predicted by commitment theory, committed subjects rejected the message and did not significantly change their attitudes toward the competing brand.

Kiesler's work also indicates committed persons are likely to reject less-direct attacks which advocate a counter-attitudinal position if the communication provided is weak enough to generate counterarguments

(Kiesler 1971). In fact, he suggests counter-attitudinal information may even produce a "boomerang effect". This is likely to occur when messages are strong enough to break through the perceptual filter set up by the committed individual (Crosby and Taylor 1983), but weak enough to be counterargued. In these circumstances, committed individuals are likely to formulate stronger attitudes toward the "committed-to" position.

Kiesler's theory, however, does indicate that committed receivers of counter-attitudinal information may abandon their positions in the presence of strong message arguments. He suggests information strong enough to overcome counterarguing is likely to lead the receiver to abandon her/his previous position. This implies a marketer attempting to change the attitude of more committed consumers must provide a message which has strong enough claims to break through the perceptual filter and minimize counterargument. Well-conceived, plausible advertising messages may be strong enough to break through these perceptual barriers. Moreover, a combination of subjective and objective message claims should lead more committed receivers to formulate more positive attitudes about an advertised brand. This study initially examines attitudinal effects of objective and subjective claim strategies; it then considers the impact of alternative claim strategies on attitudes of consumers with different levels of brand commitment.

Objective and Subjective Claim Strategies and Commitment

In general, advertising claims fall into two categories: subjective and objective (Cohen 1972, Gill and Grossbart 1985). Subjective claims use surrogate indicators to suggest existence of brand attributes or benefits. Research suggests endorsements (e.g., by professionals in a field), symbols (e.g., phrases or brand names) and exaggerated magnitudes (e.g., those created by camera angles) may serve as surrogate indicators. Objective claims explicitly provide information about attributes or benefits of a brand, e.g., in the form of direct evidence, technical specifications or numerical cues. Advertisers typically rely exclusively on subjective claims or add objective claims to surrogate (subjective) support. The use of only objective claims is less frequent; consequently this research focuses on the two more frequently employed strategies.

Assuming plausible claims are made, research indicates a combination of objective and subjective claims is more potent than exclusive use of subjective claims (Gill and Grossbart 1985). Presumably, addition of objective information to subjective implications eases the receiver's processing requirements (Mitchell and Olson 1977). It also provides more and varied arguments, which increase effects of repetition on learning (Greenberg and Suttoni 1973) and act as a peripheral cue which stimulates consideration of message points and enhances persuasion (Cacioppo and Petty 1984). Objective claims are also apt to be less ambiguous, have more perceived credibility (Holbrook 1978) and generate more support arguments and fewer counterarguments than subjective claims (Edell and Staelin 1983). Thus, consumers exposed to commercial messages with objective and subjective elements should form more positive attitudes toward an advertised brand than those exposed to messages with only subjective elements.

H1: Consumers exposed to ads with objective and subjective elements develop more positive attitudes than those exposed to ads with only subjective elements.

Our earlier reasoning suggests more committed consumers are apt to be more discriminating and more resistant to cognitive changes advocated by weaker advertising messages. Therefore, it seems likely that they would be

more skeptical of, and resistant to, subjectively-based advertising claims than their less committed counterparts. This is likely to be the case because subjective claims provide less direct evidence and lack the substantive information content which would be necessary to generate more favorable attitudes among more committed consumers. In contrast, less committed individuals should be less discriminating and selective in their evaluation and use of commercial information.

H2: Among those exposed to ads with only subjective elements, consumers with lower brand commitment develop more positive attitudes than those with higher brand commitment.

However, the situation is apt to be different when subjective claims are supported by plausible objective information about determinant attributes. More committed individuals should be more receptive to these types of claims for several reasons. First, if they are noncomparative in nature, they present no direct attack on preferred brand(s). This decreases the likelihood of receiver resistance. Second, as noted earlier, they are likely to be less ambiguous, more credible and, therefore, of greater interest to those who believe there are meaningful differences in the product category and have a tendency to discriminate between brands. Third, less committed persons are less likely to make use of such information because they are less discriminating. In contrast, more committed consumers are more likely to employ objective information to evaluate brands.

H3: Among those exposed to ads with objective and subjective elements, consumers with higher brand commitment develop more positive attitudes than those with lower brand commitment.

Method

Product and Attribute Selection

A fictitious brand of running shoes was selected because the product had been used in similar studies (Gill and Grossbart 1985; Lastovicka and Gardner 1979) and was suitable for developing commercials with both types of claim strategies. Two functional attributes -- support and protection -- were chosen based on free elicitation and attribute belief ratings obtained in a pretest (n = 58). Results suggested these attributes, originally selected along with nine other attributes from a content analysis of industry advertising, were determinant. Functional attributes were chosen because of the necessity to develop both objective and subjective claims. There were no significant differences in identification of determinant attributes by more and less committed individuals.

Subjects

Students (n=109) enrolled in an introductory marketing class served as subjects for the study. They were selected because prior investigation indicated they varied in commitment level and constituted a sizable market segment for the product.

Commitment Measure

The commitment measure was extracted from Lastovicka and Gardner's (1979) "Product Class Involvement" battery. Factor analysis of this 22-item instrument (using 7-point disagree-agree scales) suggested use of an independent three-item commitment index. This is consistent with findings of Gill and Grossbart (1985). Reliability estimates ($\alpha = .68$; $\beta = .59$) indicated the index was relatively internally consistent for exploratory research and unidimensional (John and Roedder 1981). Items included such statements as "If my preferred brand in this product class is not available

at the store, it makes little difference to me if I must choose another brand." Less committed subjects were designated as those with scores (13 or less) below the mean, while more committed subjects had scores of 14 or more. Means and standard deviations for the commitment index are listed in Table 1.

TABLE 1
RESEARCH MEASURES

Variable	Total Sample (n=109)		Ob/Sub Group (n=56)		Sub-Only Group (n=53)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Attitude	15.76	16.00	19.64	14.24	11.66	16.84
Commitment	13.88	4.26	13.89	3.83	13.87	4.71

Attitude Measure

The attitude measure was the summed product of subject beliefs about the two salient attributes multiplied by their respective importance measures. Belief (very unlikely = -3 to very likely = +3) and importance (very unimportant = 1 to very important = 7) ratings were assessed on seven-point bipolar scales. Means and standard deviations for this measure are listed in Table 1.

Research Design and Exposure Conditions

Subjects were randomly assigned to two treatment conditions. Group 1 (Ob/Sub) was exposed to television commercials which combined objective and subjective claims. Group 2 (Sub-Only) was exposed to commercials containing only subjective claims. Testing indicated there were no significant differences in the demographic profiles (sex, marital status, academic major, class year, type of residence and family income), product class experience (number of pairs and number of brands purchased in the last 5 years, familiarity with the 7 top-selling brands and miles run/jogged per week), or commitment levels of the two groups. Differences in group sizes were due to incomplete items; observation indicated incomplete items occurred in a random manner.

Subjects were told the study's purpose was to obtain opinions on television program content. Viewing occurred in classroom settings. Post-exposure belief levels and attribute importance ratings were gathered immediately after the subjects were exposed to a 30-minute general interest television program, which included three exposures to the test commercial. Ads were inserted at the same point during three commercial breaks with ads for car wax, soft drinks, beer, fast food and mops. In debriefing, subjects indicated they had not discussed the experiment, not found it difficult to understand claims, not deduced the study's purpose nor considered the experimenter rather than the company as the source of the ads. Ad repetition was not regarded as unusual since it often occurred on reruns of this and other programs.

Ads were professionally produced and directed, and featured "Contour Gliders," a fictitious brand of running shoes. They stressed the support and protection attributes identified in the pretest as determinant. Subjective claims were made by references to sports medicine experts and emphasis on the shoe's contoured insole, extra padded heel, "Cavanaugh wedge" and brand name as well as by use of exaggerated camera angles. Objective claims included references to 75% more support for the foot, ability to absorb surface impact 60% better than other shoes, and 85% fewer injuries during 800,000 miles of testing.

Results

Mean scores for each group are presented in Table 2. The overall pattern of results indicates more positive attitudes among subjects exposed to objective and subjective claims (19.64) than those exposed to only subjective claims (11.66). In addition, individuals with higher brand commitment evidence more positive attitudes (16.68) than those with lower commitment (14.75). Among those exposed to only subjective claims, the attitudes of low commitment individuals (14.00) exceed those of their high commitment counterparts (9.23). Among those exposed to objective and subjective claims, the reverse is true. High commitment group scores (22.94) are greater than attitude scores for the low commitment group (15.56).

TABLE 2
EXPERIMENTAL RESULTS

	Claim Exposure Group		
	Ob/Sub	Sub-Only	Total
Commitment	Low (12.27) (n=25)	14.00 (10.36) (n=27)	14.75 (n=52)
	High (15.06) (n=31)	9.23 (21.59) (n=26)	16.68 (n=57)
Total	19.64 (n=56)	11.66 (n=53)	

Note: Cell entries are means, standard deviations and group sizes.

ANOVA results are presented in Table 3. As expected, a significant interaction effect ($F=4.22$; $df=1$; $p = .04$) is present. While scores are in the hypothesized directions, simple effects tests provide only partial support for H1. Although more highly committed persons exposed to objective and subjective claims have significantly greater attitude levels ($F = 11.22$; $p = .001$) than those who viewed only subjective claims, this is not the case among less committed individuals ($F = 0.13$; $p = .72$). While results are also in the

TABLE 3
ANOVA RESULTS

Source	SS	df	MS	F	Sig.
Main Effects					
Claim	1735.05	1	1735.05	7.33	.01
Commitment	55.87	1	55.87	.24	n.s.
Interaction					
Claim x Commitment	998.22	1	998.22	4.22	.04
Residual	24850.47	105	236.67		

expected direction for subjects exposed to only subjective claims, contrary to H2, there is no significant difference ($F = 1.27$; $p = .26$) between commitment groups. However, there is support for H3. More committed individuals exposed to a combination of objective and subjective claims have higher scores ($F = 3.18$; $p = .08$) than less committed persons exposed to the same claims.

Discussion and Implications

These results suggest consumers who are highly committed to one or more brands may in fact formulate positive attitudes toward a competing brand which uses advertising containing plausible and salient claims. This is consistent with earlier findings (Gill and Grossbart 1985) that commercials with plausible objective claims are likely to have a more pronounced impact on receivers' beliefs than those with only subjective claims. Moreover, our findings make it clear that effects of alternative claim strategies depend on audience commitment. Consumers with higher levels of brand commitment are more positively influenced by exposure to a combination of objective and subjective claims than by subjective claims alone. In contrast, less committed persons are equally influenced by either type of claim strategy. Subjective claims seem to have a similar impact on consumers, regardless of their commitment level. Exposure to a combination of objective and subjective claims produces more positive attitudinal effects only among more highly committed consumers.

In the past, researchers seem to have regarded brand commitment as an insurmountable barrier to competitors. According to this view, consumers committed to one brand can be assumed to reject promotional efforts of competing brands. Our results indicate this assumption may not hold. Highly committed consumers can be influenced by the promotional efforts of competitive brands. Future research may also reveal other communication strategies which can be used to influence more highly committed consumers. Clearly, there is a need to more closely examine the nature of commitment and its influence on consumer behavior.

The implications of this study for marketing practitioners are no less important. Results support the formulation of differentiated message strategies for alternative target audiences. While subjectively-based messages carry a limited amount of "hard" information, they may be sufficient to influence less committed consumers. However, added objective content is advantageous when the objective is to influence attitudes of consumers committed to other brands.

Still, caution should be employed in basing conclusions on results from a single study using one product, a fictitious brand and two related attributes. Certainly, student subjects did not represent a cross-section of the market and may have been more analytic than other potential customers. Commercials were not seen in natural settings and there was no opportunity for repeated exposure over time. In more typical viewing conditions, brand commitment may cause greater differences in message awareness and attitudes. Conversely, message repetition over a longer period of time may have the opposite effect. Knowledge of effects is also restricted by the absence of multiple measures of attribute and benefit importance and beliefs. The present approach for examining effects of commitment can be extended in several useful ways. Other aspects of message structure and appeal should also be considered. Additional measures, such as claim perception, attitude toward the ad, recall and cognitive responses are needed to shed light on intervening activities which may have impacted results observed in this study.

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GENDER RESEARCH AND THE SERVICES CONSUMER:
NEW INSIGHTS AND NEW DIRECTIONS

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Abstract

Gender characteristics of interior sex role self-concepts and exterior sex role stereotyping may affect services consumer in three areas differentiating services from goods: intangibility, producer variability, and consumer demand variation. Gender research in information processing, changing perceptions of psychological traits, and societal roles has special implications for services consumers.

Introduction

Social science researchers have pioneered the study of relationships between biological gender, psychological sex traits, sex roles, and sex stereotypes in order to learn more about the interaction of personality, social organization, and the individual life cycle. Particularly since the mid-1970's, two areas of this gender research have captured the interest of marketers: exterior sex roles, and interior psychosexual self-concepts. The potential usefulness of gender concepts as a determinant of consumer behavior has motivated much of this research.

However, with few exceptions (Barak and Stern 1986; Gentry and Doering 1979) gender research in marketing deals primarily with consumer goods, not services. The reason may be that the study of services marketing as a distinct entity is relatively new (Fisk and Tansuhaj 1985) and has not yet entered mainstream consumer behavior research. Even those gender studies which have considered services - primarily leisure activities - (Barak and Stern 1986; Gentry and Doering 1979) have treated them as simply another goods-item, not a special product category.

Since services are now considered to be unlike goods on a number of critical dimensions (Berry 1980; Shostack 1977), it seems worthwhile to investigate possible gender effects in certain areas of differentiation. The rapid growth of the service economy - responsible for 70% of the GNP and nine out of every 10 new jobs generated (Shanahan 1985) - suggests the importance of studying the services firm, product, and consumer. Services may entail special relationships to gender, which should be examined in order to carve out areas for future consumer research.

This paper begins with a summary of relevant gender research, and then relates it to three areas which distinguish services from goods: intangibility, variability of production, and variations in consumption (Berry 1980). Insights from the services literature which suggest ways in which the two areas of knowledge can intersect are presented, and hypotheses developed for empirical testing in future research.

Gender Research

In marketing literature, gender research has addressed questions about the interior sexual self-concept, especially the relationship of psychological sex traits to biological sex, and interpretations of exterior stereotypical sex roles, particularly in relation to advertising and segmenting of the "women's market."

The foundations for this research stem from the other social sciences, primarily psychology. The influence of biological sex dominated sex role research prior to the 1970's, and the assumption was that biological gender was the major determinant of sex-related behavior. "Healthy" individuals were judged to be those who conformed to the sex role appropriate to their gender and manifested only those traits socially approved for that gender (Constantinople 1973; Robinson and Green, 1981).

The dynamic changes which took place in American culture in the 1960's affected sex role stereotyping, and called these traditional assumptions into question (Bem 1974; 1975; 1977; Bem, Martyna and Watson 1976; Robinson and Green 1981). The women's liberation movement and the rapid entry of women into institutions of higher learning and the workforce led to the observation that sex roles, biological sex, and sex-related personality traits may not necessarily be either immutably fixed or identical.

In the early 1970's, Sandra Lipsitz Bem developed a new theory based on the sex traits of masculinity and femininity as separate, orthogonal constructs, not biologically-based, and able to coexist in varying degrees within an individual of either sex (1974; 1975). Her theory is based on the hypothesis that individuals may be "both masculine and feminine, both assertive and yielding, both instrumental and expressive - depending on the situational appropriateness of these various behaviors" (Bem 1974). Thus, biological sex was judged less important than psychosexual gender traits in determining modes of human behavior.

The areas in which gender research has been applied to consumer behavior can be summarized as follows:

1. Sex-role self-concept and masculine/feminine traits, using a variety of scales: (Aiken 1963; Allison, Golden, Mullet, and Coogan 1980; Barak and Stern 1986; Burns 1977; Coughlin and O'Connor 1985; Fry 1971; Gentry and Doering 1977; Gentry, Doering, and O'Brien 1978; Gentry and Haley, 1984; Golden, Allison, and Clee 1979; Kahle and Homer 1985; Martin and Roberts 1983; Morris and Cundiff 1971; Tucker 1976; Vitz and Johnson 1971).
2. Attitudes towards stereotypical women's roles and advertising portrayals: (Coughlin and O'Connor 1985; Debevec and Iyer 1986; Kilbourne 1984; Venkatesh 1980; Whipple and Courtney 1980; Wortzel and Frisbie 1974).
3. Relationship of information-processing (Gentry and Haley 1984) to gender self-schema, the cognitive pathways based on sexual self-concept and used to process incoming data (Bem 1981 a,b; Markus 1977; Markus, Crane, Bernstein, and Siladi 1982; Spence and Helmreich 1981).
4. Women's social, economic, and occupational roles as segmenting dimensions (Prakesh 1986).

Most of the above studies have focused on women. While the findings have been characterized by conflicting results, some conclusions on the basis of post-1970's research are:

1. The biological sex of a respondent seems at least as good an explanatory variable, if not a better one, than his/her sex-role self-concept for product use, brand choice, media use, product perception, product gender-typing, attitudes towards women business owners, and advertising recall (Allison, Golden, Mullet, and Coogan 1980; Gentry and Doering 1977; Gentry, Doering, and O'Brien 1978; Gentry and Haley 1984; Golden, Allison, and Clee 1979; Kahle and Homer 1985; Martin and Roberts 1983). It thus appears that biological sex is as useful to marketers as psychological self-perceptions of masculinity or femininity traits.

2. The presence of psychologically based masculine sex traits in respondents of either sex explains more than the presence or absence of feminine traits in the areas of family decision-making, reactions to women's roles in advertising, and certain consumer behavior variables (Barak and Stern 1986; Burns 1977; Coughlin and O'Connor 1985). Masculinity thus seems to be the behav-

ioral trait of value for marketing.

3. Female respondents' attitudes towards women's liberation do not necessarily correlate with preferences for traditional vs. liberated role portrayals in advertising (Alreck, Settle, and Belch 1982; Duker and Tucker 1977; Wortzel and Frisbie 1974; Whipple and Courtney 1980), although feminists seem most opposed to sex-role stereotyping in general (Venkatesh 1980). Actual social changes appear to be reflected unevenly in real-world consumer behavior.

4. Gender schema does not seem to affect recall of advertising stimuli. One study (Gentry and Haley 1984) found that gender schema did not predict recall of advertisements; rather, biological sex did.

It is still not clear whether biological sex or psychosexual concepts account for sex role differences important to marketers (Prakesh and Flores 1985). In fact, post-70's gender research has concentrated on measuring the coexistence of psychosexual traits in the same individual rather than differences between male and female. At present, gender research should probably continue to measure psychological traits using the BSRI (Bem Sex Role Index, Bem 1977), despite dissatisfaction with it (Taylor and Hall 1982), since it has been the most commonly used scale in post-1979 marketing research.

Women as Producers/Consumers of Services

The potential importance of gender research in services marketing necessitates a comment on one characteristic of the services sector which differentiates it from manufacturing: sex composition. Services is the only economic sector involving women as producers as well as consumers, and as such it differs from the predominantly male-dominated manufacturing mode. In fact, in this respect, services industries can be considered "feminized" in three ways: labor, management, and entrepreneurship. Services employ mostly female labor: 80% of women working today are in the "Pink Collar" and "White Collar" labor force (Frank-Fox and Hesse-Biber 1984). Further, the majority of women currently in managerial or professional positions are in services. In 1982, 52% of women executives were found in services firms (Forbes and Peirce 1983). And, when women become entrepreneurs, an estimated 75% tend to concentrate in the service and retail areas (Bowen and Hisrich 1986). This background suggests possible distinctive gender implications of services on consumer behavior, since it is the only economic area where women are both producers and consumers.

Intangibility of Services

Perhaps the most widely noticed distinction between services and goods is tangibility: services exist in time, not space, and thus have no physicality directly perceivable by the senses. A service is often considered "a deed, a performance, an effort" (Berry 1980); it is, ultimately, an experience (Bateson 1985), and may result in little or nothing tangible for the consumer to take home. Because of their temporal nature, services involve the consumer on a higher level of abstraction and may require more complex intellectual processing. It is more difficult for the consumer to grasp the meaning of a dental procedure such as root canal, for example, than to understand a product such as toothpaste.

In order for services to be comprehensible to the consumer, deprived of familiar sensory props, they must be "tangibilized" by concretization. Important tools of the tangibilization process are symbolism, imagery (Shostack 1977), and metaphor to make services vivid and lend concrete meaning to essentially abstract products. For example, the Travelers Companies umbrella is a tangible symbol of the abstract protective quality of insurance products. Images, symbols, and metaphorical constructs have long been used in literature, especially poetry, to clothe abstractions in sensorily appealing form (Brooks and Warren 1960), but little is known about the ways in

which gender may affect individual reception of and receptivity to different imagistic messages. Since abstract human experiences are subjective, however, and depend heavily on the experiencer for meaning (Bitner, Nyquist, and Booms 1985), the contribution gender knowledge may add to understanding the mind of the message recipient is potentially quite valuable. Whether men and women understand imagery in the same or different ways based on biological sex, psychological sex traits, or some combination of the two, is particularly important in services, which exist in large part only through images and symbols in the consumer's mind.

The area of gender schema and information processing seems useful for the study of services and concretizing imagery. There is reason to believe that individuals process data in accordance with cognitive schema ordained by learned sex roles (Bem 1981 a,b; Markus, 1977; Markus, Crane, Bernstein and Siladi 1982). Even though this research has only been in existence since the mid-1970's, and is still rather controversial (Bem 1981 b; Spence and Helmreich 1981), it appears to be relevant to the imaging process. Any special relationships between processing of imagery and pre-ordained cognitive patterns learned on the basis of gender roles would be useful to the services marketer, particularly dependent on imagery to stimulate consumer involvement.

Services research has yielded two provocative but still untested concepts relevant to information processing which seem promising in their gender implications: vividness of imagery (Drumwright 1985) and personal template constructs (Klein and Lewis 1985). These give rise to two hypotheses about the effect of services intangibility on the consumer.

Vividness of Imagery: Memory Recall.

H1: Masculine (feminine) imagery will be recalled more readily by masculine (feminine) typed consumers.

The vividness bias in information processing suggests that vivid information is more readily available in a consumer's memory for recall and retention (Drumwright 1985). The quality of vividness has been shown to be associated with concrete words and emotionally interesting images. Services show special need for vividness - tangible clues in the form of concretized and 'emotionally coded' imagery - to become embedded in consumer memory. Although empirical evidence of the vividness effect is rare, the area deserves further study in the light of potentially different gender relationships to vividness and its uses in advertising recall. It seems likely that recall differs by gender, since what is emotionally arousing to males, displays of aggression for example (Maccoby and Jacklin 1974), is not so to females. This suggests that macho aggressive symbols such as the investment company T. Rowe Price's black horned ram may be recalled more readily by masculine types than feminine.

Personal Template Constructs: Understanding Imagery.

H2: Masculine (feminine) types attach different meanings to masculine (feminine) images.

The area of personal construct theory (Klein and Lewis 1985) has been used to set forth a framework enabling marketers to use tangible clues as signs representing the intangible attributes characteristic of experiential products. The basis for this theory is that "it is the consumer's construct system which ultimately defines [his/her] reality" (Klein and Lewis, 1985, 108). Each individual appears to have a personal construct "template," which s/he uses to process information and make sense out of the real world. Constructs of the intangible are more subjective than those of the tangible. For services, "the surrogates become the tangible or metaphorical clues" (Klein and Lewis 1985, 109) that consumers use to construct their personal realities. The marketer's task is to find out what the consumer's construct is, so that an appropriate sign can be created,

allowing the consumer to assimilate the product message correctly. For example, if a consumer interprets Prudential-Bache's symbolic rock sailing along a river as a threatening, destructive force, rather than a stable beneficial one, then that consumer's personal reality may attach negative denotative meanings to the company's financial services. Since the jutting rock is an obviously sexual symbol, it may mean different things to masculine and feminine types.

Both of these theories suggest gender-related questions pertinent to information processing. To begin, there is the global concern: does each gender process symbolic input in the same way? Do symbols and images filter through the mind on the basis of biological sex, sex-role self-concepts, interactions between the two, or, perhaps, other dimensions altogether? In terms of possibly important psychological gender differences, T. Rowe Price's ram may be recalled differentially by masculine and feminine types, just as Prudential's rock may be interpreted differentially. Because these symbols function so centrally in creating services' reality, it is important to understand ways they are processed, stored, changed, and ultimately understood. The consumer of financial services has no tangible item such as canned peas or motor oil to process mentally, and thus attaches much more significance to the signs a company conveys. As yet we know very little about how gender functions in symbolic cognition of these signs. In view of the sexual overtones of many symbols, it seems mistaken to assume that they mean the same thing to each gender.

Production Variability

A second difference between goods and services also flows from their differing temporal status: producer variability. Goods, especially assembly-line products, are turned out with little variation, while service experiences are, strictly speaking, never precisely the same twice in a row. This production variability stems from the simultaneity of service production/consumption in time (Berry 1980), and results in an inability to standardize services to the same degree as goods. Because a service is often produced and consumed at the same time - evident in experiential activity such as hair cutting or theatrical performance - the consumer may be present IN the service factory, interacting with the provider. This interaction is personal and immediate: no buffer of time or space separates the two. The "high-contact" nature of many service relationships (Chase 1978) involves a fifth and most uncontrollable "p": people. Services personnel are often barely differentiated from the product itself - for example, airline personnel may represent the totality of the flight "product." A lack of standardization of services follows as a result of the variability of people input: each provider brings his/her own personality and life script to the service encounter and interacts with a consumer, who also carries his/her own agenda.

This simultaneity and lack of standardization create the need for service firms to exert control over interaction processes by motivating customer-centered behaviors in their own employees, a management task called "internal marketing." (George 1977, 1986; Gronroos 1981, 1985). Increasing depersonalization of services (Hollander 1985) has led to consumer dissatisfaction with provider behavior: services personnel are often perceived as rude, disinterested, or hostile. Since the service provider and consumer are often face-to-face, the attitude of the provider can determine consumer decisions about personal satisfaction and product quality. The provider's relationship with the customer becomes emblematic of the service product in situations ranging from medical care to interior decoration (George 1977, 1986; Gronroos 1981, 1985). In this sense, services firms differ considerably from manufacturing ones (Schneider and Bowen 1984): an assembly-line worker has little to no contact with the final consumer, while a nurse's aide or an automobile repairperson does. Non-caring service employees can directly alienate a consumer on an immediate and personal level, unlike disaffected assembly-line workers who can

only sabotage the customer indirectly by careless workmanship.

Human variability in the production of services and the concomitant need for high levels of positive employee behavior seem to imply gender issues in at least two areas: the depiction of stereotypical sex roles in advertising (Fennell and Weber 1984; Roberts and Koggan 1979) and stereotypical sex traits associated with interpersonal relationships (Prakesh and Flores 1985). Two hypotheses can be generated on the basis of producer variability in services.

Stereotypes and Advertising.

H3: Masculine (feminine) types will show differing emotional responses to masculinity (femininity) of imagery in advertisements.

The subject of sex traits and advertising imagery has been considered in a set of research propositions put forth about advertising (Prakesh and Flores 1986) which has interesting implications for services. Suggested scenarios for attractive advertising images were created based on research hypotheses about the desire of women for intimate relationships vis à vis the desire of men for personal space. Women's attraction to intimacy and men's hostility to it were linked to the potential appeal of stereotypical portrayals and situations based on the message recipient's psychological gender.

If symbols and images are understood intellectually and recalled differentially (H1 and H2) by each gender, then it is also likely that they arouse different emotional responses. Symbolic usage may attract/repel each gender according to the emotions aroused. For example, the Dreyfus Investment Company's lion may be exciting to males, but frightening to females. One Bem experiment, in fact, implies this: feminine-typed women did not show nurturant behavior towards a baby kitten, but DID play with and cuddle a human baby when Bem repeated the experiment (Bem 1975). Bem hypothesized feminine-typed fear of animals. If this is the case, then the same symbol designed to elicit emotional responses may affect each gender differently. Symbols are powerful sexual stimuli, and pertinent gender-related associations require attention in terms of creating advertising messages which do not unintentionally confuse or alienate consumers.

Stereotypes and Interpersonal Relationships.

H4: Stereotypical feminine sex traits associated with interpersonal relationships convey attributes of caring to consumers.

Stereotypical sex traits associate women with excellence in nurturant caretaking, and men with strong aggressive leadership. These stereotypes have remained constant for twenty years (see e.g. Rosenkrantz et al. 1968; Williams and Bennet 1975), and may or may not be biologically-based (Maccoby and Jacklin 1974). The services firm seems to require a qualitative dimension of feminine-associated traits which differs from more "macho" characteristics deemed desirable in manufacturing. If women are indeed more adept at personal relations - better "caretakers" - they would seem to be the better providers of services with the desired human touch. The call for nurturant values in the service sector (Schneider 1980; Czepiel, Solomon, Surprenant and Gutman 1985) seems like a call for the restructuring of services on a more feminized model. In fact, the question, "Does corporate America need 'feminine skills'?" has also been asked in the popular press (Hughey and Gelman 1986), particularly in reference to a dehumanization often associated with American business enterprise.

In reference to gender research, the presence of a feminine caretaking stereotype may affect the marketing activities of services in several ways. Services seem to have a reservoir of "people" skills to tap into by virtue of the numbers of women employed in both managerial and

labor positions. How can the firm maximize nurturance traits such as sensitivity and sympathy, generally thought to be characteristic of women, and desirable both for internal and external marketing? The use of female figures as spokespersons symbolizing the service - Leona Helmsley, for example, as the Queen standing guard over the Palace Hotel - seems to be a campaign based on conveying particular care for the consumer by having the Monarch Herself ensure that guests are treated royally. Since women seem to have an advantage in either possessing or being thought to possess nurturant qualities, certain services try to transform these caring traits into attractive consumer appeals by using women as product personifications.

Some questions must be raised, however, about the accuracy of these stereotypical characterizations in the 1980's, widely acknowledged to be an era of social, personal, and value change (Zimney 1984). The cards are by no means in on the nature, definition, and current interpretation of stereotypes and sex traits. A controversial body of literature on androgyny (see e.g. Taylor and Hall 1982) as well as a recent consumer behavior study (Barak and Stern 1986) implies that perhaps masculine/feminine are neither as strongly dichotomized nor mutually exclusive as has been assumed. Both men and women seem to have been given "permission" by rapid and widespread societal change to adopt behaviors generally thought to be associated with the opposite sex: men can express nurturant feelings, and women display powerful actions to a greater degree than ever before. Yet it is not clear that this message of change in the stereotypical feminine/expressive, masculine/instrumental has become widely adopted by or even acceptable to the mass market. In a period of value transition such as the present, it seems reasonable to assume that different consumers view the association of nurturance and femininity differently, and that both old stereotypes and newer revisions may co-exist for some time.

Consumer Variability in Demand

A third significant difference between goods and services, also related to the temporal dimension, is consumer variation in demand. This is particularly important as an input of consumer involvement, measured by perceived importance of the stimulus in a specific situation where time pressure is a factor relevant to the decision process. Since services exist in time, they cannot be inventoried as goods can, and are far more subject to fluctuation in consumer demand (Sasser 1976). The task of smoothing out the demand curve in services is one of the most important and difficult marketing tasks: both a lost producer-hour and an unconsummated customer transaction are irreplaceable. No storage process exists to adjust the needs of the producer to those of the consumer, and supply and demand both require active management.

Services need to cope with wide varieties of human change which seem directly related to gender issues, but about which little is known. The need for services to reshape the supply/demand equation to reduce the impact of consumer variability seems to relate in some ways to the gender issue of changing societal roles of women. While the women's market has been segmented on various dimensions of working/non-working, job commitment, value systems, and attitudes towards women (see Prakesh 1986), the reality of the enormous number of women in the labor force - never before encountered in the American economy - has not yet been widely considered in relation to the variety of role and lifestyle options newly available to the services consumer.

Two intra-individual dimensions of change - developmental role restructuring across an individual's lifetime and role shifting within a person's daily life activities - also have implications as gender issues relating to services. There is evidence that people not only exhibit role changes throughout life (Robinson and Green 1981), but also show changes in daily life as a result of the need to balance a multiplicity of divergent roles simultaneously. This is particularly evident and stressful

for working women, who in the course of a short span of time may need to switch back and forth in a variety of roles such as manager, wife, mother, and daughter (Lenney 1979). While the roles of men have not received as much attention in recent literature as those of women (Debevec 1986), we can also assume that these changes impact them. The relationship of rapid shifts in role enactment impacts consumer involvement in terms of high and low time pressures in purchase situations. At any given moment, the consumer market appears to be in role flux: each sex can move in and out of both new and accustomed non-biological roles by the day, the year, or the decade.

The relationship of changes in sex roles across an individual's lifetime has not been extensively studied in the consumer behavior discipline, for longitudinal studies are rare (Dickson 1982). One implication of change in both the individual and society over time (Heilbrun and Schwartz 1982) is that marketers, especially those in service industries, should be examining relationships between sex traits/roles over the consumer life cycle as well as the product life cycle, since both men and women seem to show different levels of masculinity and femininity at different times in their lives (Puglisi 1983). Age, period, and cohort effects (McBroom 1984) would also seem to impact different market segments' demand states in different time periods. However, the study of change as a consumer dimension has barely begun.

Change and Consumer Involvement. One hypothesis can be put forth on the basis of research in situational segmentation:

H5: Different service attributes are sought by consumers depending on the interaction between time pressure and gender-role enactment in purchase situations.

Recent examinations of the significance of situational segmenting (Dickson 1982; Hornik 1982) can be extended into the services area because of the relationship of situational events to change. The concept behind person-situation segmentation (Dickson 1982) is that consumers can be categorized not primarily on "demographics, personality traits or attitudes," (Dickson, 58) but on interactions between the individual and the situation (Hornik 1982). Consumer behavior can be viewed, then, as subjectively related to temporal events, and segmentation can take place on the basis of particular consumer needs in particular usage situations. Since individuals take on different roles in different situations, and usage situations themselves change over time (Dickson 1982), the consumer should no longer be viewed as a fixed target.

There seems to be a relationship between this kind of segmentation and the consumer demand variability which is one characteristic of services, also related to changing sex roles. In fact, time itself - the root of most differences between services and goods - has been called "the ultimate factor differentiating alternative consumption strategies" (Hornik 1982). Fluctuating consumer demand seems to be related to changeable sex roles, since usage behavior appears to vary depending on what situational role the consumer is enacting at any given time. For example, the female consumer shopping in a department store at lunch hour may seek store attributes of rapid service, ease of payment, and streamlined selection as a result of interaction between limited time and career pressures diminishing her involvement in the act of shopping. The same woman consumer shopping on a Saturday, however, might seek discount prices, lack of sales pressure, and in-depth selection as a result of interaction between the social nature of the shopping trip and her role as a recreational shopper.

The critical question for services is, what is the relationship of changing sex roles, both within society and the individual, to demand patterns? One unknown is the difference - whether it exists, and to what extent - in the tolerance of men and women for demand dissatisfaction or the discontinuities that seem inevitable in service production. The involvement level of consumers

stressed by interactive increased time pressure and multiple role shifts may be causing changes in consumer purchase of services. The reaction of a constantly changing consumer requires careful attention to ensure proper "fit" between desired attributes and service performance in any given situation.

Conclusion

Thus, the area of gender research holds great promise for the service industries, since there are many qualities of services which differ from goods in ways which imply gender-related distinctions. The intangibility of services, their production variability, and consumer demand variations all seem to relate to popular areas of gender research, such as sex-role self concepts, advertising stereotypes, and actual social/occupational role changes. New examinations of the service sector as an area distinct from manufactured goods seem likely to yield promising results in the light of what is now known about gender characteristics, and what remains to be discovered.

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SOCIAL AND POLITICAL MARKETING ISSUES:
BROADENING THE SCOPE OF CONSUMER BEHAVIOR

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Abstract

This paper reviews the previous papers presented in the "Broadening the Scope of Consumer Behavior" session. The purpose of each paper is first presented with similarities and contrasts among the papers, as well as critical comments and suggestions for each paper, following.

Introduction

Certainly, both society and the discipline of consumer behavior benefit from the careful examination of such socially relevant issues as: the stages of drug involvement, adolescent shoplifting behavior, and the effect of campaign expenditures on voting behavior. Today, great efforts are spent on campaigns to reduce drug (including alcohol) abuse, however, we are still far from a full understanding of each stage of addiction, as well as the appropriate promotional prescriptions to reduce addiction in each stage. Shoplifting is notably one of the largest monetary crimes, yet is just beginning to be examined to understand reasons for such behavior, as well as the programs needed to curtail this activity. In the political marketing arena, recent campaign expenditures have reached extraordinarily high levels, raising market power and inequality questions in elections. Undoubtedly, research examining the many effects of campaign expenditures on voting behavior is welcomed.

The present papers have contributed to knowledge in their respective fields by examining these difficult, socially-relevant issues. Specifically, the DePaulo, Rubin, and Milner paper offers a model of the stages of involvement with addictive drugs and presents the model as a basis for future research on the effects of drug-related marketing efforts. Moschis, Cox, and Kellaris present the results of an exploratory study of adolescent shoplifting behavior utilizing theories of cognitive development and social learning. Finally, Siomkos and Ghosh present the results from a sample of the 1982 Congressional elections in examining differences in the effects of campaign expenditures on voting patterns by incumbency status and party affiliation of the candidate.

Similarities and Contrasts

There are marked similarities among the first two papers (stages of drug involvement and adolescent shoplifting behavior). One common theme appears to be a relatively sparse body of empirical research on these social marketing issues. A likely explanation is the difficulty of accurately measuring these and other "negative" social behaviors (e.g., gambling, overeating, smoking). The traditional measure of self-response, although insightful, may be biased if there exists any indication to the subject that their anonymity has been compromised. In comparison, attempts to unobtrusively measure (e.g., observation; asking respondents to assess why "others" would shoplift or use drugs) negative behaviors may also face validity problems because they might be measuring factors other than personal motivation to engage in the negative behavior. The development of multiple measures to assess negative behavior may be a step toward reconciliation of these problems.

In contrast to the limited nature of empirical research on these behaviors, there exists a multitude of theories and explanations for addiction behavior (cf., Lettieri, Sayers, and Pearson 1980), as well as for shoplifting behavior (e.g., cognitive development and social learning theories). These theoretical frameworks will be helpful in the empirical research process.

In the case of the effect of campaign expenditures on voting behavior, there exists a rich body of past empirical

research on the topic. However, there is a need to incorporate the many research variables into a conceptual model of voter behavior. On the micro-level, some work in this regard has been initiated (cf., Newman and Sheth 1985).

With these similarities and contrasts in mind, the papers are now discussed separately with specific suggestions for future research.

Stages of Drug Involvement

Although the seven stages of the addiction process (trial, light use, transition to addictive use, addictive use, cessation of addictive use, post-cessation, relapse-repeat dependence) developed by DePaulo, Rubin, and Milner offer only a minor variation of the Lettieri, Sayers, and Pearson (1980) Model (initiation, continuation, transition: use to abuse, cessation, relapse), exceptional insight is provided throughout the stages, including important motivational and social group influences. The discussion provided a link between each stage of drug involvement and theoretical frameworks, such as Shimp and Dyer's (1979) factors influencing drug consumption. A significant contribution of the paper is the suggestion that anti-drug abuse campaigns can be more effectively targeted recognizing the motivational differences of addicted individuals across the seven stages.

One caution in the application of the seven-stage model of addiction is that the initial step of the process is trial. Although the introductory stage is mentioned as including "the events and influences leading up to, and including, the individual's initial use of the substance," a specific subdivision of these trial antecedents would be helpful in the formation of anti-drug abuse campaigns. Of particular assistance would be the initial stages of the adoption process (awareness, interest, evaluation) as well as the stages of information processing (exposure, attention, comprehension, yielding/acceptance, retention). Indeed, as indicated by Shimp and Dyer (1979, p. 42) "... investigation of the advertising-drug use link would greatly benefit by focusing on intermediate processing stages (e.g., comprehension; agreement; McGuire 1976)..."

In the paper, although there are clear implications for market segmentation, recommendations and implications concerning marketing effectiveness and drug involvement lack empirical support. For example, empirical support, at this time, is needed for claims that "conditioned" cues (e.g., drug paraphernalia, beer bottles) intended for those in stages 1 to 3 may have unintended, detrimental effects (e.g., relapse) if advertised to those in stage 6. The notion of conditioning behavior (cf., Allen and Madden 1985) assumes a repeated pairing between the conditioned stimulus (e.g., paraphernalia) and unconditioned stimulus (e.g., the drug itself) in order to elicit the same response over time, or extinction results. Any research on this topic would need to determine if (1) extinction has occurred during the cessation stage, and (2) whether the meaning of the conditioned cues has changed during cessation. For example, drug paraphernalia may have elicited positive responses for the addict during addiction, but during the cessation stage, they might have an entirely opposite effect. Empirical research would also have to acknowledge that many advertisements are a reflection of society and, therefore, one in cessation is just as likely to be exposed to cues from friends and acquaintances as from advertising. In addition, those in controlled (vs. strict) consumption conditions would still have access to cues via their treatment and should not be included in a study of these effects. Investigation of the interactions between trial experience and advertising (Deighton 1984; Hoch and Ha 1986; Smith and Swinyard 1982; 1983) would be helpful in research of this nature.

Adolescent Shoplifting Behavior

As with the previous papers, given the sparse body of prior research on this topic, it was a pleasure to see a study of this nature.

In the Moschis, Cox, and Kellaris study, cognitive development and social learning theories were used as a framework for the investigation of adolescent shoplifting behavior.

For the most part, the methodology (of prime importance in such a study) was very carefully developed. In particular, admirable efforts were made to ensure the anonymous nature of the questionnaire. Care was also devoted to efforts in establishing the reliability of motivational shoplifting scales. Additionally, all hypotheses were presented with sound reasoning, grounded in theories of cognitive development and social learning, and past (albeit sparse) empirical support.

Turning to the results explanation, some discussion is needed explaining why some of the results (especially in the case of H6 and H7) were contrary to prediction. For example, in the case of H7(a), why was the youth's socio-economic status significantly, positively correlated with economic motivations for shoplifting - contrary to prediction? One likely possibility emanates from the measurement of the motivations for shoplifting. Since the statements were designed to measure why others ("they") steal (vs. why the respondent would steal), it is possible (in H7(a)) that a respondent from a higher socio-economic status was thinking of "they" in terms of others with a lower socio-economic status. Therefore, the higher the status, the greater the agreement that they (those with a lower status) would steal for one reason or another. The consistency across attitude, frequency, and motivational measures should be maintained.

As indicated in the Moschis, Cox, and Kellaris paper, it is difficult (with a correlation/cross-sectional study) to establish the causality of the frequency of communication with peers and shoplifting behaviors. This problem, however, also surfaces for many other variables examined, such as socio-oriented family communication and shoplifting behaviors. Future research should focus on longitudinal and experimental (although difficult) designs to help establish causal predictions.

The delineation of differences between antecedents and consequences of shoplifting behavior is an important direction for future research. Efforts in this regard, as well as help from the adoption process and information processing stages, will aid in research attempting to develop a theoretical framework of shoplifting behavior.

The Effect of Campaign Expenditures on Voting Behavior

This paper, authored by Siomkos and Ghosh, investigated the impact of campaign expenditures on voting patterns by incumbency status and party affiliation. Independent (campaign expenditures, incumbency status, and party affiliation) and dependent (percentage of actual votes received) variables were selected with great care based upon a solid foundation of research in political advertising (e.g., Chapman and Palda 1984; Palda 1975; Rothschild 1978; Soley and Reid 1984; Welch 1976). Perhaps the strongest contribution of the paper was the well articulated development of the linear and nonlinear models of voting behavior. Suggestions are now in order for two important areas of the research: results explanation and development of conceptual model of voter behavior.

Beyond the general advantages of incumbency and the voting results of Democrats vs. Republicans, additional information is needed explaining why the results of the absolute and marginal effects of campaign expenditures on voting behavior occurred in this situation. For example, is it possible that following the enormous Democratic defeat in the 1980 election year voters now selecting Democratic incumbents were operating under lower levels of involvement

(Rothschild 1978) than those selecting incumbent Republicans? If this were true, a significantly greater impact of campaign expenditures would be predicted for the lower involved electorate. As indicated in the Siomkos and Ghosh paper, future studies should further probe the nature of the asymmetries.

Given the multitude of variables hypothesized to have an impact on voter behavior (e.g., incumbency, party affiliation, involvement, past party history, success of top candidates of party, length of message, closeness of race, etc.), perhaps what is needed is a conceptual model or framework showing how these primarily external variables serve to influence voting behavior and its consequences. Some work in this regard has focused upon internal variables and factors affecting primary voter behavior (cf., Newman and Sheth 1985). As a final note, longitudinal models assessing the impact of voter attitude formation, intentions and behavior would also help to provide better insight into the dynamics of the political process.

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STAGES OF INVOLVEMENT WITH ALCOHOL AND HEROIN:
ANALYSIS OF THE EFFECTS OF MARKETING ON ADDICTION

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Abstract

Involvement with addictive drugs such as alcohol and heroin occurs in a series of stages starting with trial and possibly progressing to addiction, treatment, and relapse. Motives, social groups, and other influences differ markedly from stage to stage. This model can provide a basis for research on the effects of drug-related marketing efforts such as advertisements for alcoholic beverages and media campaigns against substance abuse. Whereas prior research has tended to examine the effects of marketing efforts on usage in general, future studies should attempt to pinpoint the specific effects on users in particular stages.

Introduction

The impact of marketing efforts on the consumption of addictive substances has been the subject of two separate, major areas of investigation. In one area, scholars have attempted to examine the effects of the marketing of alcohol and legal drugs on substance use and abuse. One example of inquiry in this area is the study of the effect of over-the-counter drug advertising on the use of both legal and illegal drugs (Shimp and Dyer 1979). Drug commercials, it is feared, portray taking medicine as the way to solve life's problems, and (inadvertently) encourage overuse of drugs in general. Another example is the research on the effects of the marketing of alcoholic beverages on the overall incidence of alcohol use and abuse (Popper 1986). In the other major area, researchers have evaluated the anti-drug and anti-alcohol-abuse advertising and public information campaigns that have been launched over the past two decades (Bandy and President 1983). The work has sought to determine whether these social marketing efforts actually do accomplish their objectives in mitigating substance abuse and addiction.

All three review articles cited above have characterized the relevant empirical studies as generally inconclusive. Also, all three articles identify methodological difficulties, such as the need to rely on user self-reports (of questionable validity), as key reasons for the lack of definitive data on the effects of marketing on substance abuse.

We propose that an additional reason for the inconclusiveness of these studies is that the data usually have been collected without regard to the particular stage of an individual's involvement with an addictive substance. As will be explained in detail in this paper, stages of drug involvement include trial, non-addictive use, addictive use, cessation (with possible treatment), and relapse back into addictive use. A drug-related marketing effort may have a different effect on individuals in one of these stages than on individuals in other stages.

Background Information and Terminology

For the benefit of readers who are unfamiliar with this topic, a brief introduction is in order.

The addiction literature includes contributions from a variety of disciplines, including psychology, psychiatry, sociology, social work, and anthropology. Perhaps due to this wide range of perspectives, there is no consensus with regard to how such basic terms as "drug," "substance abuse," and "addiction" should be defined. "Abuse" and "addiction" are often used synonymously,

but some writers use the label "abuse" in a more general sense to include not only addiction but also noncompulsive problem behaviors such as the use of inhalants or prescription drugs for dangerous or inappropriate purposes. However, there is general agreement that alcohol is indeed a drug (Levison, Gerstein, and Maloff 1983; Miller 1980), despite the tradition of referring to alcohol as separate from other drugs (as in the expression "drug and alcohol abuse"). There is also general agreement that people are "addicted" to a drug if the following phenomena are evident in their behavior: tolerance, withdrawal, and strong craving.

Tolerance has developed if the euphoria or other effect of a particular dosage of the drug is not as strong as it once was before the addiction developed, and a larger dosage is now needed to produce a strong effect. Whereas tolerance refers to effects of a drug that is in the bloodstream, withdrawal symptoms are unpleasant after-effects. In the case of opiates, withdrawal symptoms include nausea, tremors, cramps, rapid heartbeat, chills, sweating, gooseflesh, violent yawning, muscle spasms, depression, and anger (Jaffe 1980). Although these symptoms can persist for more than a week in severe cases, they can be eliminated quickly by consuming the drug again. Because these withdrawal symptoms appear when the drug wears off, and disappear when the drug is again ingested, the individual is said to have developed a dependence on the drug. The unpleasantness of withdrawal is presumed to be the basis for the craving, which, in the case of heroin, is commonly assumed to compel some addicts to commit crime in order to obtain a constant supply. It should be noted, however, that some theorists believe that environmental factors are more important than withdrawal in motivating the heavy consumption of the alcoholic or drug addict (Falk, Dews, and Schuster 1983).

In treating the addicted individual, the first step typically is detoxification--during which ingestion of the drug is stopped (or gradually reduced). During detoxification, medical assistance is provided to alleviate discomfort while the withdrawal syndrome runs its course. The next step is outpatient counseling or psychotherapy, or in some cases temporary residence in "halfway houses" or "therapeutic communities" (e.g., Phoenix House). The purpose of this step is to aid in the transition from inpatient care to being on one's own.

Stages in the Addiction Process

The seven-stage model described below is a minor adaptation of a five-stage sequence outlined by Lettieri, Sayers, and Pearson (1980). This model is specifically formulated to depict alcoholism and opiate addiction, which are the most heavily researched compulsive behaviors. Although the model might also be helpful in the analysis of addiction to other drugs (e.g., amphetamines and barbiturates), and in the study of some non-drug habits such as "running addiction" (Sachs and Pargman 1984) and compulsive gambling, we will restrict our discussion to opiates and alcohol.

Stage 1: Trial

The first stage includes the events and influences leading up to, and including, the individual's initial use of the substance. For most users, initial trial occurs in adolescence. The novice is typically introduced to the substance by a more experienced user who happens to be a peer (Kandel and Maloff 1983).

As a rule, novice opiate users have already had experience with other addictive and/or illicit drugs. The most common developmental sequence followed by an individual is as follows: (1) beer and/or wine, (2) cigarettes and/or hard liquor, (3) marijuana, and (4) other illicit drugs such as cocaine and heroin (Kandel and Maloff 1983). Of course, use of the substances that typically come early in this sequence does not inexorably lead to use of the later substances. While "social drinking" is the norm in American society, relatively few individuals proceed to cocaine and heroin.

Stage 2: Light Use

Usage of an addictive substance does not necessarily lead to addiction. The development of dependence appears to require sustained, heavy usage. Most people who regularly consume alcohol never become "addicted" either physically or psychologically. Even in the case of heroin, which is regarded as highly addictive, there are some users who don't seem to develop a compelling physical dependence.

At this stage, mild withdrawal symptoms may occur at the end of a particular usage occasion, e.g., a "hang-over" in the case of alcohol. However, if the individual does not find it difficult to resist further consumption, then the person would not be considered addicted.

If usage after trial is sufficiently heavy, Stage 2 may be skipped and the development of dependence in Stage 3 may begin.

Stage 3: Transition to Addictive Use.

As noted above, if usage is sufficiently heavy, then the individual will experience progressively stronger withdrawal symptoms and more powerful craving to consume the drug. Individuals seem to vary in the amount of consumption that is necessary for producing addiction, and to some degree this individual variation may be genetic (McClern 1983).

There is no definite dividing line between light use (Stage 2) and the beginning of the transition to addiction. Likewise, there is no clear point of separation between craving that is strong but manageable (end of Stage 3), and craving that is so compelling that the individual would be considered "addicted." The inclusion of this stage in the model is in recognition of the fact that dependence and addiction are not all-or-none phenomena.

Stage 4: Addictive Use

In this stage the individual is so involved with the addictive substance that job performance and family life may be severely compromised. From the point of view of the non-addicted observer, it seems that these negative consequences far outweigh any benefit that the individual could possibly receive from the substance. Hence, addictive behavior is commonly characterized as "irrational" (Falk, Dews, and Schuster 1983).

Stage 5: Cessation of Addictive Use

This stage begins when an individual makes a serious attempt to break away from dependence. The individual may try to quit without help, or with some formal program of assistance. Formal assistance can include support groups such as Alcoholics Anonymous and Narcotics Anonymous, a stay at a detoxification center, residence in a relatively isolated therapeutic community such as Phoenix House, or some combination of these approaches. According to Miller and Hester (1980), most people who come into an alcohol treatment program already have tried some kind of self-help measure in an attempt to cope, but without adequate success.

Stage 5 ends when the withdrawal syndrome from the last

bout of consumption has run its course and, in the case of an individual who enters a therapeutic community, when the individual leaves the community. Some clients leave these communities before completing the recommended course of therapy; the probability of relapse for these individuals is higher than for those who complete the therapy (Holland and Evenson 1984).

State 6: Post-Cessation

In this stage, the individual attempts to refrain from any further use of the addictive substance (abstinence), or to consume it in such small and infrequent amounts that dependence is not reinstated (controlled consumption). While abstinence has traditionally been the goal of formal support groups and treatment services, some controversial programs attempt to teach clients "controlled consumption" (Harding et al. 1980; Miller and Caddy 1977). The assumption behind strict-abstinence programs is expressed in the adage, "once an addict, always an addict." Specifically, it is assumed that formerly-dependent individuals will always be more susceptible to the effects of the relevant substance than individuals who have never been dependent on it. Thus, even a small amount of the substance might trigger a strong craving, which in turn could motivate further consumption. This snowball effect would result in the reinstatement of strong dependence. In contrast, the proponents of controlled consumption maintain that complete abstinence is an unrealistic goal, and that small amounts of the substance need not have a snowballing effect for individuals who have been given appropriate guidance (review: Cummings, Gordon, and Marlatt 1980).

Formerly-dependent individuals often are advised to avoid circumstances where the substance is likely to be consumed. One reason why exposure to these circumstances may be risky is that these circumstances include stimuli that could evoke craving as a Pavlovian conditioned response. Studies of opiate addicts (Grabowski and O'Brien 1980) and alcoholics (Ludwig et al. 1977) have suggested that the kinds of cues encountered consistently during consumption (the sight of the substance, drug containers, drug-using companions, etc.) have become conditioned elicitors of psychological craving, and possibly some physical withdrawal symptoms (review: Donegan et al. 1983).

This stage and the one that follows (post-cessation and relapse) are of special concern because recidivism rates are so discouragingly high. Surveys of treatment facilities indicate that most current clients have already been to the same clinic for treatment at least once. The person's chances of avoiding relapse are assumed to depend on what transpires in the post-cessation stage (review: Cummings, Gordon, and Marlatt 1980).

Stage 7: Relapse-Repeat Dependence

Although no stage in this sequence is inevitable, it is noteworthy that many individuals go through repeated episodes of treatment and relapse no matter what kind of treatment they may have had. Such individuals have been labeled "hard core" or "treatment-resistant" alcoholics or addicts.

Relationship to Field-Theoretic Models

Several field-theoretic models of the various types of influences on drug use, such as family, peers, mass media, school, church, needs, and values, have been proposed (Shimp and Dyer 1979). According to Shimp and Dyer, for example, the various fields of influence affect the likelihood, frequency, and circumstances of drug consumption, as well as the types of drugs used. The 7-stage model proposed here is not an alternative to these field-theory frameworks, but rather a supplement to them. Specifically, the fields of influence proposed by these models can influence the drug user in all stages of the addictive process outlined above. However, as will be illustrated below, the important

factors within these fields of influence differ from one stage to the next. We will focus this discussion mainly on motivation and social group influences.

Variations in Influences Between Stages

In Stages 1 and 2, motivation to try and occasionally consume a particular drug could involve either positive incentives or negative (escapist) motives. The positive factors include sensual pleasure (e.g., euphoria of getting high), social reinforcement (peer group influence is almost always critical), desire for a change of pace, or "immediate gratification" in general (Lang 1983). Negative motives include helping to cope with anxiety or stress.

However, negative desires may be relatively more important in motivating the individual to consume heavily enough to build a strong dependence (Stage 3). With regard to alcohol, the tension-reduction hypothesis (Marlatt 1976) implies that the people most likely to consume enough alcohol to become addicted are those who happen to have a relatively high amount of stress or anxiety in their lives. Although the evidence in support of a "simple" tension-reduction hypothesis is mixed, an individual's expectation that alcohol provides relief for various stresses and discomforts does appear to play a role in the etiology of alcoholism (Nathan 1980). A related view is that alcoholics are individuals who are low in self-esteem and have little confidence in social interactions. Therefore, they drink to forget about their perceived personal deficiencies (Cutter and O'Farrell 1984). With regard to opiates, the importance of escapist motivation in Stage 3 is suggested by the finding that individuals who come from broken homes, drop out of school, get arrested, and have a prior history of using other drugs are especially likely to progress from trial of heroin to addiction (Graven and Shaef 1978; Robins et al. 1980).

In Stage 4, strong physical dependence has developed, and an important source of motivation to continue heavy consumption of the drug may now be the extreme discomfort of the withdrawal syndrome, although the empirical evidence on the role of this motivation with regard to non-opiate addictive substances is not clear (Cappell and LeBlanc 1979). Avoiding withdrawal is indeed a "negative" motive, but it is different in character from the negative motives presumed important in Stage 3. Furthermore, addicted users may no longer be motivated by some of the factors that originally instigated trial in Stage 1. For example, the drug experience is no longer a change of pace, and tolerance assures that the euphoria of the drug high is diminished or absent. As observed by Allport (1937), compulsive behaviors (such as addiction) tend to assume a "functional autonomy" by which the motives initiating the behavior often bear little relation to those responsible for its continuation.

Most drug use starts in adolescence. As addicts mature, more and more of them try to quit their habits (Stage 5). Common motives for attempting to quit include the need to fulfill family responsibilities (Rosenbaum 1979), and the restoration of self-esteem (which is likely to have reached a low ebb due to the social stigma of addiction; Carmichael et al. 1977). Again, these kinds of motives are not applicable to earlier stages.

Key influencer groups also differ in this stage. Whereas peers may have the biggest impact leading to initial use, quitting or entering treatment typically is influenced by family members, employers, pharmacists, doctors, clergy, emergency medical personnel, police, courts, etc. (The power of some of these groups, of course, may be coercive.) Indeed, these influential groups may be more receptive to anti-addiction information from the media than the addicts themselves.

In Stage 6 (post-cessation), most individuals occasionally consume small amounts of the substance on which they

were formerly dependent, even if they have been advised by counselors and support groups to remain totally abstinent. When violating the abstinence rule, they may risk starting the snowball effect leading to relapse. Motives for abstinence violation include reducing stresses of various kinds, conforming to social norms by partaking of the addictive substance in a group, and testing one's own ability to control one's habit. The assumption of "once an addict, always an addict," which is based on the supposition that even a small amount of the substance can trigger a binge leading to rapid reinstatement of physical dependence, implies that a motive which is not strong enough to lead to the development of addiction (in Stage 2) may be sufficient to lead to relapse into addiction in Stage 6.

Since one motive for violating the abstinence rule includes conforming to social norms by partaking of the addictive substance in a group, social companions are a relevant reference group (Cummings, Gordon, and Marlatt 1980). Although social pressure to consume small amounts would not have been sufficient to generate initial dependence in Stage 3, the same level of social pressure in Stage 6 could start the snowball effect, leading to relapse.

Another possible source of motivation for violating the abstinence rule is the elicitation of "craving" reactions by Pavlovian conditioned stimuli. As noted earlier, laboratory and survey research has suggested that stimuli which were present during drug taking occasions (Stage 4) have acquired the capacity to evoke psychological craving and possibly also physical withdrawal symptoms (Donegan et al. 1983). Such stimuli can include the drug containers (drinking glasses, syringes) or the companions with whom one has consumed the drug in the past. The individual may encounter such stimuli at social gatherings with ones' peers. Some of the conditioned stimuli, particularly in the case of alcohol, appear regularly on television. Hence, even though the withdrawal syndrome from the individual's last ingestion of the addictive substance may have run its course long ago, conditioned craving (psychological and/or physiological) may be elicited by drug-related environmental stimuli. It may be hard to avoid these stimuli.

Analysis of Effects of Marketing on Drug Use

In this section we present examples of some implications of the multi-stage drug involvement model for the study of drug-related marketing efforts.

Anti-Drug-Abuse Media Campaigns

As a hypothetical example, consider an informational campaign which explains the hazards of drug use and shows pictures of drug paraphernalia (e.g., syringes, cocaine powder). And suppose that such a campaign gets some exposure to individuals in all stages, even if was intended only for individuals in Stages 1-3. The campaign may indeed have the desired effect (reduction of trial and usage) on individuals in Stages 1-3. However, Stage 6 individuals who are trying to remain abstinent might experience some conditioned withdrawal symptoms as a result of seeing the drug paraphernalia. In some cases, this might precipitate relapse. Individuals in Stage 3 may not be affected at all, because they will learn little that they don't already know about the drug they currently consume, and because the effects of conditioned stimuli in the campaign probably would not add anything more to the effects of the actual drug stimuli they encounter regularly. Hence, the net effect of the campaign on overall drug usage should depend on how those individuals reached by the advertisements happen to be distributed across the stages; if many are in Stage 6, then the campaign actually could be counterproductive.

The Marketing of Beer

Consider, for example, television commercials for beer, which have been criticized for contributing to alcoholism. These advertisements, it is said, encourage alcohol abuse by their portrayals of drinking as fun, glamorous, socially expected, etc. Stage 1 individuals may indeed be motivated to try alcoholic beverages, as a result of viewing these ads. But do these commercials lead to the heavy, frequent consumption that culminates in physical dependence in Stage 3? Arguably, these commercials encourage the kind of moderate drinking that does not lead to dependence. The actors in the commercials do not appear to be drunk, and their drinking seems to be motivated by social interaction, not by stress reduction (a motive thought to be responsible for consumption sufficient to lead to dependence).

However, for formerly dependent alcohol users in Stage 6, exposure to beer commercials may result in the elicitation of conditioned withdrawal symptoms, and these symptoms could motivate relapse. Another mechanism that might increase the probability of relapse would be the tendency of these advertisements to encourage moderate, social drinking. Although this encouragement may tend to prevent the development of addiction in Stage 3, in Stage 6 this same influence might precipitate relapse in these presumably susceptible individuals.

The above analysis implies that the effects of beer advertising on the prevalence of addictive drinking may depend on which group is larger--the number of Stage 3 individuals who have been influenced not to drink heavily enough to become addicted, or the number of Stage 6 individuals for whom relapse is precipitated by the same advertising.

Designing Anti-Substance-Abuse Campaigns

The main purpose of this paper is to espouse a particular way of conducting research on effects of drug-related advertising, i.e., individuals in different stages should be analyzed separately. However, it should be noted that the multi-stage model described here also serves a related purpose--to aid in designing anti-substance-abuse media campaigns. Specifically, the model can be used as a segmentation variable in these public service efforts. Successful anti-addiction advertising requires careful targeting of specific audiences (Schmeling and Wotring 1980).

A comprehensive discussion of the practical implications for anti-addiction marketing would be beyond the scope of this paper, but one application will be described here to exemplify the potential usefulness of the model. As discussed earlier, it is possible that advertisements which contain usage cues such as shot glasses and syringes could elicit conditioned withdrawal reactions in individuals who are in Stage 6 (post cessation), and such reactions might in turn precipitate relapse. Thus, such cues should be avoided in anti-addiction advertisements which will be encountered by an appreciable number of Stage 6 individuals. However, it might be beneficial to show drug-usage stimuli in advertisements intended for other audiences. For example, there may be educational value in providing information on drug-use circumstances to non-users in Stage 1. Also, such advertising may be helpful to parents, who must be able to recognize drug paraphernalia in order to detect substance abuse among their children. In such cases media selection and scheduling should be done so as minimize exposure of Stage 6 individuals to the advertisements containing the usage cues.

Limitations

One major limitation of the analytical approach advocated in this paper is that there will often be uncertainties in the classification of individuals by stage. For example, it would be especially difficult to define cut-off points operationally for distinguishing among

Stages 2, 3, and 4. These uncertainties would be the basis for increased error variance in research using the model.

However, we maintain that research which attempts to use these stages as a basis for analysis, despite a fair amount of classification error, will be more productive than research which simply lumps individuals in all the stages together. It should also be noted that classification uncertainties are common in the addiction literature.

Conclusions

Research on the effects of marketing efforts on addictive behavior must take into account the stage of the addiction process that an individual has reached. A particular marketing effort that may have beneficial effects on individuals in one stage of the process can have detrimental effects on individuals in another stage. These differential effects may be masked when drug users from different stages are analyzed as a single group.

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AN EXPLORATORY STUDY OF
ADOLESCENT SHOPLIFTING BEHAVIOR

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Abstract

This paper presents the results of an exploratory study of adolescent shoplifting behavior. A conceptual framework is first presented as a blue print for studying shoplifting behavior. Within this framework hypotheses are developed based upon theories of delinquent behavior and some scattered empirical data. The study results suggest that peers may play an important role in the development of shoplifting behaviors. Some directions for future research are suggested.

Introduction

Marketers and consumer behavior researchers traditionally have investigated consumer behavior in order to understand how to better market products/services. As a result, the focus of their research efforts has been upon understanding normative consumer behaviors (e.g., comparison shopping, information seeking) as well as desirable behavioral patterns, at least from the marketer's point of view, such as brand loyalty and store loyalty. Considerably less attention has been devoted to understanding undesirable consumer behaviors that have negative consequences upon businesses and society as a whole.

Shoplifting is an undesirable activity which has become a growing concern not only among retailers but also among consumer educators, governments and social scientists. It is the nation's largest monetary crime, accounting for up to 7.5 percent of dollar sales (Messenger 1975) and over \$16 billion annually (Forbes 1981), and it is on the rise (Velocci 1978).

Retailers concerned with shoplifting generally have two broad strategies for reducing shoplifting losses: shoplifter detection and shoplifting prevention. Although most of the efforts have focused upon shoplifter detection, this strategy remains highly questionable for at least two reasons. First, reliable records show that for every one theft apprehended thirty-four get away (Taylor 1979). Second, often those apprehended are more likely to do more subsequent shoplifting than those not apprehended (Klemke 1978).

Shoplifting prevention, on the other hand, involves increasing the difficulty of shoplifting (e.g., installing electronic warning systems) and decreasing the desire for shoplifting among potential shoplifters. The latter involves identifying characteristics of those likely to shoplift that would help in alerting security personnel, as well as understanding the process leading to the development of shoplifting behavior and its prevention.

Previous research attempting to identify characteristics of shoplifters has offered insights into the profile of the typical shoplifter (e.g., Robin 1963; Cameron 1964; Won and Yamamoto 1968; Brandy and Mitchell 1971; Wright and Kirmani 1977; Beck and McIntyre 1977; Klemke 1982). Unfortunately, many of these studies use only subjects who have been apprehended. Furthermore, their results are not interpreted in the context of any theories that would help us better understand why people shoplift.

The purpose of this paper is to present a conceptual framework which suggests antecedents and social processes contributing to the development of shoplifting

behavior, and to test this proposed approach and resultant hypotheses on a small scale basis using teenagers. Teenagers were chosen as an appropriate group to study because young people are reported to account for most shoplifting (Verill 1978; Stores 1971; Security Management 1978). Explanations for this particular aspect of deviant behavior are sought in theories of developmental psychology and sociological models of human behavior which are integrated into a broader socialization perspective. The socialization approach makes the assumption that in order to understand human behavior one must specify its social origins and the processes under which it is acquired and maintained (McLeod and O'Keefe 1972).

Theory And Hypotheses

Two general models of human behavior are used to explain the acquisition of consumer behavior in general and delinquent behavior in particular among youths: the cognitive developmental model and the social learning model. Studies utilizing the cognitive developmental approach seek to explain the development of youths' delinquent behavior as a function of qualitative changes (stages) in cognitive organization occurring between infancy and adulthood. Such stages are often defined in terms of cognitive structures the child can use in perceiving and dealing with the environment at different stages. The acquisition and subsequent enactment of delinquent norms is assumed to occur as the child moves from one stage to the next. The social learning approach, in contrast, seeks to explain learning of delinquent behaviors, norms and values as a function of sources of influence in the child's environment. Learning of such orientations is assumed to be taking place during the person's interaction with such sources of influence, commonly known as "socialization agents," in various social settings defining the structure of the child's physical and sub-cultural environment. Such social "structures" often have a direct effect upon the learning of various behaviors as well as an indirect effect by influencing the person's level of interaction with the various socialization agents.

Previous researchers have placed these models and variables in a context of a socialization perspective that has been used to explain various aspects of the person's behavior, including consumer behavior, over the life cycle (e.g., Churchill and Moschis 1979; Moschis forthcoming). Generally, age is viewed as an index of cognitive development and is perceived along with other variables which define various socio-cultural attributes as antecedent variables. These factors affect the person's interaction with, and processes of learning from the social milieu. Socialization agents define the socialization process which, along with the antecedent variables, can have direct impact upon the acquisition of values, norms, and behaviors -- i.e. outcomes. In sum, cognitive developmental perspectives are used to explain the relationship of age with the socialization process and outcomes, while social learning models are used to explain the acquisition of learning properties from socialization agents in various social (structural) settings (Churchill and Moschis 1979, Moschis forthcoming).

Previous researchers have applied socialization perspectives to the study of various aspects of youth's

delinquent behavior, including shoplifting. For example, Klemke (1978 and 1982) studied the relationship between age and delinquency among youths and the role of peer influence on shoplifting. Similarly, Powell and Moschis (1986) investigated shoplifting behavior of juveniles from a socialization perspective. The present study extends this sparse body of delinquent socialization research by examining a greater number of relationships between antecedent and socialization process variables and shoplifting motivations, attitudes, and behavior, thereby providing a potentially broader perspective.

Specifically, it is believed that with increasing age the adolescent is likely to become more susceptible to peer pressure. Studies, for example, show that peer influence increases with age during adolescence (e.g., Campbell 1969; Churchill and Moschis 1979). Since shoplifting involves game-like aspects which are shared with others (e.g., fun and excitement) (Gold 1970; Cameron 1964; Klemke 1982), age is expected to be positively related to such sporting motivations for shoplifting, and these sporting motivations are expected to be associated with peer interaction frequency.

- H₁: Sporting motivations for shoplifting are positively related to age.
- H₂: There is a positive relationship between frequency of communication with peers about shoplifting and:
 - (a) social motivations for shoplifting, and
 - (b) sporting motivations for shoplifting.

As socialization agents, peers may also affect shoplifting behaviors and attitudes. Klemke (1982) studied 1,189 juveniles and found a strong relationship ($r = .82$) between the youth's recent shoplifting behaviors and his/her knowledge of a close friend who had also shoplifted. Thus, it is possible that peers may serve as a source of awareness as well as attitude and behavior development regarding shoplifting.

- H₃: Frequency of communication with peers about shoplifting is positively related to:
 - (a) favorability of attitudes toward shoplifting, and
 - (b) frequency of shoplifting.

The extent to which peers are likely to be used as a reference group and source of influence appears to be a function of the youth's family structure. Generally, theory and research suggest that youths most likely to engage in delinquent activities are those from large families and unstable homes or from homes where one or both parents are frequently absent, those who are at odds with their parents and whose behaviors are constantly restricted by their families (Moschis forthcoming). These conditions are likely to alienate the youth, leading her/him to turn to peers in an effort to compensate for lack of parental attention, warmth and supportiveness, and even engage in activities disapproved of by parents (e.g., delinquent behaviors). These youths are likely to become assimilated into peer groupings which tend to be less acceptable in the dominant peer groups of the school.

- H₄: Family size is positively associated with:
 - (a) social motivations for shoplifting
 - (b) favorable attitudes toward shoplifting, and
 - (c) frequency of shoplifting.
- H₅: The degree of absence of parents is positively associated with:
 - (a) social motivations for shoplifting
 - (b) favorability of shoplifting attitudes, and
 - (c) frequency of shoplifting.

Communication structure, as a socialization process variable, may also influence a child's behavior. "Socio-oriented" communication structures are a style of parent-child communication which emphasizes obedience, deference, and family harmony (cf., McLeod and O'Keefe 1972). Because families placing ample restrictions on their children are characterized by such a communication structure (cf., McLeod and O'Keefe 1972) it is expected that:

- H₆: Socio-oriented family communication will be positively associated with:
 - (a) social motivations for shoplifting
 - (b) favorability of attitudes toward shoplifting, and
 - (c) frequency of shoplifting.

Finally, research shows that socioeconomic characteristics of youth may explain shoplifting behavior and motivations. Specifically, studies point to a moderate negative relationship between socioeconomic status and shoplifting (Won and Yamamoto 1968; Klemke 1982). The likely higher propensity for lower social-class youths to shoplift may be due to lack of economic resources:

- H₇: The youth's socioeconomic status is negatively associated with:
 - (a) economic motivations for shoplifting
 - (b) favorable attitudes toward shoplifting, and
 - (c) frequency of shoplifting.

Methodology

Self-administered anonymous questionnaires were distributed by trained doctoral students to a judgement sample of approximately 150 adolescents in middle and high schools. This sample of subjects was representative in terms of the major socio-economic variables, such as parents' occupation, race, etc. for the purpose of this study.

The nature of the shoplifting behavioral self-report items posed a potential threat to obtaining accurate (i.e., truthful) responses. Human subjects have demonstrated a propensity to report "socially desirable" responses in surveys, presumably to reduce or avoid personal discomfort, embarrassment, etc. (Cannell et al. 1977; Sudman and Bradburn 1982). A number of strategies were used in the design and administration of the present study to minimize this problem.

The specific wording of the instructions and questions was a major consideration in the design of the survey instrument. Following the guidelines set forth by Sudman and Bradburn (1982), the questions were carefully worded so as to minimize the potential personal threat to the respondents. For example, printed instructions on the questionnaire included sentences such as "We are interested in your thoughts about a number of things people your age often do," and, "Below are listed a number of situations that teenagers often experience." Threatening terms such as "Stealing" were avoided in direct reference to the respondent in favor of phrases such as "... happen to have taken from the store without paying...".

Several strategies were also implemented in the administration of the survey to promote accurate responses. First, according to prior arrangement, the subjects' teachers were asked to leave the classrooms during the procedure. The procedure commenced with a brief informal introductory speech explaining the purpose of the study in general terms. The speech emphasized the subjects' anonymity and the voluntary nature of the exercise. Several carefully constructed arguments for responding as honestly as possible were presented. (e.g., "Since you are asked not to put your name on the

questionnaire, no one will know who you are.") Next, subjects were given ample opportunity to ask questions about the study and the procedure before they filled out the questionnaires; also, they were encouraged to ask questions during the session. Subjects were told that they were free to terminate their participation at any time. Completed questionnaires were returned by the individual subjects to an enclosed box. After all questionnaires had been collected, a volunteer was solicited from among the subjects to scramble the order of the returned questionnaires in the box in plain view of the others. Finally, the box was closed and the subjects were thanked for their cooperation.

An informal debriefing was held with a subsample of participants. No significant apprehension about the survey on the part of the subjects was noted. Upon probing, no subjects could think of any way that responses could be "traced back" to an individual.

Dependent Variables

Motivations for Shoplifting. Social, economic, and sporting motivations for shoplifting were measured by asking subjects to respond to statements measured on a 5-point "very much agree" (5) to "very much disagree" (1) scale. The statements were designed to assess "reasons why teens may steal things". Many of the items used were similar to those used in previous research (Klemke 1982). The items making up these scales are listed in Table 1. Social motivations consisted of five items which loaded on the hypothetical factor. The alpha reliability coefficient of this five-item scale was .89. Economic motivations were measured using seven items designed to measure various "rational" aspects of shoplifting. The reliability coefficient of this scale was .72. Sporting motivations were measured using three items which loaded on the hypothetical factor designed to measure the "game-like" aspect of shoplifting. The alpha reliability of this scale was .82. The motivations for shoplifting are reliable with alphas of .70 or higher. These motivations also have discriminant validity in that on a factor analysis, each of the items included in the 3 motivations loaded highly (.5 or above) on the hypothetical factors of social, economic and sporting motivations, while the other items not included in that scale loaded at .2 or below. Also, the items on these scales had been used by previous researchers (Klemke 1982).

Attitudes toward shoplifting were measured by summing responses to seven items measured on a 5-point "very much agree" (5) "very much disagree" (1) scale designed to measure cognitive and affective orientations toward the act of shoplifting. A typical item of this scale was "Shoplifting is a crime." The alpha reliability coefficient of this scale was .85. Shoplifting frequency was measured by asking respondents to indicate on a 3-point "several times"- "never" scale how often they had taken each of ten specific items from a store without paying during the past year. The items were: candy/sweets, records/tapes, sporting equipment, clothing, health items, school supplies, books/magazines, toys, drugs/alcohol, and cigarettes. These items were suggested by previous research to be among the most frequently purchased products, and therefore the most likely to be shoplifted by teenagers. The reliability coefficient among those who had shoplifted at least one item during the past year (n=53) was .79.

Independent Variables

Frequency of communication with peers about shoplifting was measured by summing responses to five point "very often"(5) - "never" (1) scale designed to measure cognitive and overt interaction about shoplifting. A sample item was: "my friends and I talk about stealing things." The alpha reliability coefficient for the

scale was .83.

TABLE 1
ITEMS IN THE MOTIVATIONS FOR SHOPLIFTING SCALES

	<u>Reliability Coefficient</u>
<u>Social Motivations</u>	.89
a. They steal because their friends are doing it.	
b. They steal because their friends dare them to do it.	
c. They want to please their friends.	
d. They steal because a friend needs the item.	
e. They steal because friends want them to steal.	
<u>Economic Motivations</u>	.72
f. They need the item badly.	
g. They want the item, but they don't want to pay for it.	
h. They want to have items to sell to others.	
i. They steal because they are told they can't have it.	
j. They steal because they can't legally buy the item.	
k. They steal because they want to get even with the store.	
l. They steal because they might be embarrassed to buy the item.	
<u>Sporting Motivations</u>	.82
m. They steal just for fun.	
n. They steal for excitement.	
o. They steal just to see what it is like to steal.	

Socio-orientation communication structure was measured in line with previous research by asking respondents to indicate the frequency of parent-child communication style stressing obedience, deference, and family harmony (cf. McLeod and O'Keefe 1972; Moschis forthcoming). Responses to six items designed to measure the construct were measured on a five point "very often" (5) - "never" (1) scale. A typical item of this scale was: "(Parents) say you (child) may not buy certain things." The reliability coefficient was .60.

Family size was measured by the number of family members (siblings). Absence of parents was a measure as follows: 1=respondent lives with both parents; 2=respondent lives only with one parent; 3=respondent does not live with his/her parents. While recognizing the potential drawbacks of this operationalization, pragmatic considerations led us to favor this simple measure. More complex measures might be used to tap the underlying construct more precisely. However, this would have unduly lengthened the instrument and the potential contribution was not deemed sufficient to merit their inclusion. Socioeconomic status was measured using Duncan's (1961) scale of occupations.

Results

Table 2 shows descriptive statistics and correlations among all variables used. Table 3 shows the partial correlations used to test the hypotheses.

Sporting motivations for shoplifting was positively associated with age ($r = .03$) and frequency of communication with peers about shoplifting ($r = .01$) as posited. However, the level of statistical significance was insufficient to support Hypotheses 1 and 2b. The anticipated relationship between social motivations for shoplifting and peer communication was confirmed ($r=.16$; $p<.05$) (Hypothesis 2a).

Frequency of communication with peers about shoplifting was also found to be positively and significantly related to both favorability of attitudes towards shoplifting ($r = .20$; $p < .01$) and frequency of shoplifting ($r = .57$; $p < .001$). Thus Hypotheses 3a and 3b were supported by the data.

The expected influence of family size was found to be positive as stated in Hypotheses 4a, 4b, and 4c. Specifically, the association between family size and

shoplifting frequency was significant ($r=.24, p < .05$), which supports Hypothesis 4c. The hypothesized relationship between family size and social motivations was not statistically significant, while the relationship between family size and shoplifting attitudes approached significance ($r=.14, p < .06$).

The degree of absence of parents from the home was also positively associated with social motivations for shoplifting ($r = .13; p < .06$), favorability of attitudes toward shoplifting ($r = .14; p < .06$), and frequency of shoplifting ($r = .14; n.s.$). These findings offer only minimal support for Hypotheses 5a, 5b and 5c, respectively.

Socio-orientation in family communication was positively but insignificantly associated with social motivations for shoplifting as posited ($r = .05$) (Hypothesis 6a). Socio-oriented communication, however, was negatively associated with both favorability of attitudes toward shoplifting ($r = -.10$) and shoplifting frequency ($r = -.20$). Not only was the nature of the associations too weak to support Hypothesis 6, but, in the specific cases of 6b and 6c, the association was in the opposite direction.

Finally, social class was positively associated with economic motivations for shoplifting ($r = .20; p < .01$), shoplifting attitudes ($r = .08; n.s.$), and shoplifting frequency ($r = .07; n.s.$). These results

are counter to what was hypothesized, providing no support for Hypotheses 7a, 7b, and 7c.

Discussion

The data presented in this study should be interpreted with extreme caution due to the small sample size used and the location from which they were drawn. The main purpose of the research was to present a conceptual framework and some empirical findings that could be used in order to more systematically investigate delinquent behaviors (e.g., shoplifting) in future research. The exploratory findings of the study suggest some interesting possibilities for future research. One of the areas which deserves further investigation pertains to the role of peer influence on the development of shoplifting behaviors. Unfortunately, in cross sectional studies (such as ours) it is difficult to determine the direction of causality between frequency of communication with peers about shoplifting and shoplifting frequency. Longitudinal designs are much more suitable for answering such questions. Another direction for research concerns the role of motivations for shoplifting, and more specifically the antecedents and consequences of such motivations. Our data suggest that much of shoplifting may be done for social reasons, and those shoplifting for such reasons do not necessarily hold positive cognitions toward

TABLE 2
MEANS, STANDARD DEVIATIONS, AND ZERO-ORDER PARTIALS

Variable	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10
1. Peer Comm. Re: Shoplifting	10.08	4.34										
2. Socio- Oriented Family Comm.	21.69	4.61	-.01									
3. Age	15.88	1.61	-.01	.07								
4. Family Size	3.08	1.71	-.09	-.00	.15							
5. Absence of Parents	1.50	.58	.17	.19	.02	-.01						
6. Socio- Econ. Status	44.04	27.62	.05	-.11	-.07	-.14	.02					
7. Social Motivations	15.68	5.31	.18	.07	-.09	.03	.17	.02				
8. Rational/ Economic Motivations	22.12	5.44	.24	.03	-.07	.05	-.02	.09	.48			
9. Sporting Motivations	9.32	3.53	.01	-.11	.03	.01	.03	-.06	.35	.21		
10. Attit. Re: Shop- lifting	13.01	5.26	.22	-.09	-.17	.10	.15	.08	.04	.17	.01	
11. Freq. of Shop- lifting Behavior*	12.78	3.06	.60	-.25	.03	.15	.13	-.08	.34	.39	.17	.50

*Based on Subsample of Shoplifters Only (N=53)

shoplifting. Thus, it would be useful to develop an understanding of the sequence in which motives, attitudes, and behaviors develop, including their antecedents and consequences on undesirable consumer behaviors. This study represents a preliminary venture into the "dark side" of consumer behavior. The conceptual framework developed herein might be applied to the study of other undesirable consumptive behaviors, such as littering, immoderate or over-consumption of certain products (eg. unhealthy snack foods), compulsive shopping, buying, or gambling, and chronic over-extension of personal financial resources.

This research has demonstrated the influence of peers and social situations on adolescent shoplifting behavior as well as the relevant motivations and attitudes that result in a deviant consumption behavior. Hopefully, this framework can serve as a base from which to examine this and other deviant consumption behavior, and, more importantly, help develop programs that will curtail these deviant practices.

TABLE 3

RELATIONSHIPS BETWEEN SOCIALIZATION PROCESSES, ANTECEDENT VARIABLES AND SELECTED SHOPLIFTING ORIENTATIONS (N=143)

INDEPENDENT VARIABLES	SHOPLIFTING MOTIVATIONS			SHOPLIFTING ATTITUDES	SHOPLIFTING FREQUENCY*
	Social	Economic	Sporting		
Socialization Processes					
Peer Communication re: Shoplifting	.16 ^c (E)		.01(E)	.20 ^b (E)	.57 ^a (E)
Socio-oriented Family communication	.05(E)			-.10(O)	-.20(O)
Antecedent Variables					
Age			.03(E)		
Family Size	.05(E)			.14(E)	.24 ^c (E)
Absence of Parents	.13(E)			.14(E)	.14(E)
Socio-economic Status		.20 ^b (O)		.08(O)	.07(O)

a < .001
b < .01
c < .05

Note: Table entries are partial correlation coefficients
E--Relationship is in the expected direction
O--Relationship is in the opposite direction

*Based upon sample of shoplifters only (n=53)

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ASYMMETRIES IN THE EFFECT OF CAMPAIGN EXPENDITURES ON VOTING PATTERNS

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Abstract

Campaign expenditures by political candidates have significant effects on election results. Results from a sample of 1982 Congressional elections are analyzed to study the nature of this effect and to determine whether the incumbency status and party affiliation of the candidates lead to asymmetries in this effect. Results show that both incumbency status and party affiliation cause significant differences in the effect of campaign expenditures on votes polled. Asymmetries exist in the overall effect of campaign expenditures as well as in the marginal effect of changes in the level of expenditures.

Introduction

Researchers from a number of disciplines have investigated the role of advertising and mass communication on voting behavior. It is now well established that campaign expenditures by political candidates, especially political advertising, has a significant effect on voting patterns and on the outcomes of political elections. Surveys of individual voter attitudes as well as econometric studies of the effect of political advertising and promotional expenditures on actual voting patterns have provided evidence of this impact.

In this study the results of a sample of the 1982 Congressional elections are analyzed to test the nature of the relationship between campaign expenditures and voting patterns. Specifically, we seek to determine whether asymmetries exist in this effect that are caused by the incumbency status and party affiliations of the candidates. That is, does the effect of campaign expenditures on voting patterns differ between incumbents and challengers and between candidates with different party affiliations. A differential impact of campaign expenditures across incumbency status and party affiliations will point to asymmetries in the institutional structure of the political markets (Crain 1977).

Advertising and promotions in the arena of political elections is believed to convey information to voters regarding candidates' stands on issues and their programs. This view of the role of political campaigns assumes that campaign promotion leads to a dissemination of information to the electorate and results in more reasoned choice on the part of individual voters. If, however, there are significant asymmetries in the impact of campaign expenditures on voting patterns, incumbency and party affiliation may be associated with "market power" (Bain 1968) that gives incumbents significant advantage over challengers. According to Welch (1976), the advantage of incumbency may result from two sources. First, incumbents can raise campaign funds more easily (see also Jacobson 1980; Soley and Reid 1984). Second, the level of awareness that results from holding office is hard to overcome by challengers. Party affiliation may provide added advantage to the incumbent depending on the political climate in the country as a whole and in the local area in particular. Because of this, expenditures by some candidates may have a greater impact than expenditures by others. We use two alternative econometric models to test for the existence of such asymmetries in our sample.

Review of Past Studies

There has been a number of studies that have investigated how mass communication and advertising affect the cognitive, attitudinal and behavioral intentions of voters. Most early studies of the impact of political advertising

in fact argued that advertising had little or no effect on voting behavior. This "limited effects" argument was supported by a number of early studies (see, for example, Lazarsfeld, Berelson and Gaudet 1944), as well as by the more recent study by DeVries and Torrance (1972). DeVries and Torrance found that voting intentions were affected more by news and interpersonal communications than by political advertising.

Drawing upon the results of more recent studies, Rothschild (1978) challenged the limited effects hypothesis and argued that the effects of political communication are moderated by the individual's involvement with the political process. Rothschild posits that in low involvement situations advertising has a strong or at least a moderate effect on awareness and intentions but little or no effect on voter attitudes. In high involvement situations, on the other hand, advertising may have some effect on awareness but little effect on attitude and behavior. These generalizations are supported by the results of a number of studies. Patterson and McLure (1976) report that viewers of political advertising who had less interest in the election had a greater attitude change than viewers with high interest. A similar pattern was found by Swinyard and Coney (1978) who studied the effect of direct mail campaigns and political canvassing. They, too, found that voting intentions were positively affected in low involvement situations while promotional effort had little effect on intentions when voters were highly involved with the campaign. Rothschild (1978) provides additional evidence supporting the involvement hypothesis.

An alternative approach to studying the impact of campaign expenditures is to investigate its effect on actual voting patterns. Palda (1975), for example, examined the relationship between actual voting behavior and several independent variables in a sample of Canadian elections. In addition to the level of advertising by the candidates, the independent variables included in the study were: level of other campaign expenditures; incumbency status of the candidate; urban-rural nature of the district; past party history in the district; and, success of the candidate at the top of the party ticket in the provincial election. Palda's analysis of actual election results from 108 electoral districts in Quebec for 1966 and 1970 and 53 electoral districts in Manitoba for 1973 confirmed the significant impact of campaign expenditures on actual voting behavior.

As Rothschild (1978) notes, the importance of Palda's study is enhanced by the fact that he used actual voting behavior rather than voting intentions gathered from survey data as the dependent variable. Moreover, use of an econometric model allowed him to assess the relative impact of the different independent variables. In the 1966 elections, the most important variable was the level of non advertising campaign expenses. The level of advertising was the second most important variable. In 1970 the effect of advertising followed that of other expenses and incumbency status. In the aggregate, advertising returned about one-third of a vote to the candidate (Rothschild 1978).

In a more recent study, Chapman and Palda (1984) monitored the influence of campaign expenditures on voting behavior from the view point of sales response function modeling. They used simultaneous equations to describe relationships among votes, candidates and campaign expenditures. The study employed eight election events in order to test for the presence of a generalizable

pattern of results, and analyzed "aggregate" electoral district data which were free of survey errors as opposed to individual survey responses data. Preference of the electoral body is, however, revealed by the total number of votes received by each candidate. The study's main empirical result was that a candidate's "own" communications efforts (represented by campaign expenditures) positively affect votes received, while competitive communications efforts draw votes away from the candidate.

In the United States, Grush, McKeough and Ahlering (1978) studied the relationship between advertising expenditures and voting patterns for the 1972 Congressional primaries. The authors found advertising to have a significant impact, but that the level of the impact was moderated by the level of previous exposure of the candidate. Advertising expenditures were less significantly related to election outcomes when the candidate had previous exposure.

Soley and Reid (1984) report on a more recent study of the 1974 and 1976 elections to the U. S. Congress. They tested and confirmed the hypothesis that the percentage of votes received by a congressional candidate is significantly related to total promotional expenditure by the candidate. That was the case even when the candidate's incumbency status and party affiliation were controlled. Based on an analysis of covariance of the percentage of votes received by each candidate they concluded that promotional expenditures were as important a determinant of votes received by each candidate as incumbency status and party affiliation. Further, they report that the strength of the relationship between promotional expenditures and votes received was the same for incumbents and challengers and did not vary with party affiliation.

Aim of Present Study

Previous research has established the important impact of promotional expenditures on election outcomes. A candidate's share of votes in an election is related to the level of promotional expenditures. This is similar to the results from studies conducted in "product" markets which have shown that the level of promotional expenditure is significantly related to a brand's market share (see, for example, Naert and Weverbergh 1981; Ghosh, Neslin and Shoemaker 1984; Brodie and de Kluyver 1984).

Studies of promotional effectiveness in product markets also posit that there may exist significant asymmetries in this effect across individual brands. Comanor and Wilson (1979), for example, argue that there is asymmetry between new and established brands due to differences in the degree of experience consumers have with the brands. The result is a significant difference among brands in the marginal impact of promotional expenditures on sales and market share. Schmalensee (1972) also posits such asymmetries due to differences in familiarity with products and promotional skills. Theoretically, the asymmetries result from lower cross elasticities of demand between established and new brands that give established brands significant market power (Bain 1968; Comanor and Wilson 1979).

In the context of voting, this implies that the relationship between campaign expenditures and the percentage of votes received (market share) may be different for incumbents and challengers. In addition, the party affiliation of the candidate may also moderate the impact of campaign expenditures on voting patterns. Data from a sample 77 Congressional elections in 1982 are analyzed in this study. The sample of districts were chosen to achieve a balance between geographical area, urban and rural districts and party affiliation of incumbents. The data were obtained from FEC's Report on Election Campaign Finances and FEC Monitoring Activities 1983. Only districts in which there was a straight contest between a Republican and a Democratic candidate were included in the study.

An important step in testing an econometric model is the specification of the functional form of the relationship between the dependent and the independent variables (Naert and Leeflang 1978). Since there is no previous evidence on the most appropriate functional form for testing the relationship between campaign expenditures and voting patterns, two different functional forms -- a linear and a non-linear model -- are used in this study. In each model the dependent variable of interest is the percentage of the votes received by candidates (V). However, since the voting procedure is viewed as a binary choice by individual voters and the percent votes polled by each candidate is constrained between zero and one hundred, a logit transformation is used in calibrating the models. If V_i is the percent votes received by a candidate i , we define:

$$TV_i = \ln[V_i / (1.0 - V_i)]$$

to obtain the transformed variable. The independent variables used are: (i) campaign expenditure by the candidate as a percentage of the total expenditure in the district (CE), (ii) the incumbency status of the candidate and (iii) the candidate's party affiliation. Details of the models used in the study are shown in Table 1. We now briefly discuss the rationale behind the development of the models.

If the functional relationship between TV and CE is linear, a simple model of this relationship can be written as follows:

$$TV = a + b(CE) + e \quad (1)$$

Equation (1), however, does not account for any potential asymmetry in the impact of CE on TV due to incumbency status and party affiliation. In order to test for the possible impact of incumbency status and party affiliation on the overall relationship, we define three dummy variables (INCD, CHD and CHR) to categorize the candidates into different incumbency-party affiliation groups. The variable INCD is assigned the value of one if the candidate is an incumbent and is affiliated with the Democratic party. It takes the value of zero in all other cases. The variable CHD takes the value of one if the candidate is a Democrat and a challenger, otherwise it is assigned the value of zero. Similarly, the value of CHR is one when the candidate is a challenger affiliated with the Republican party. Assigning values to INCD, CHD and CHR in this manner also defines the fourth group of candidates. Candidates who are affiliated with the Republican party and are incumbents have the value of zero on each of these three variables.

There are two potential sources of asymmetry in the relationship postulated in equation (1). First, the overall effectiveness of campaign expenditures may be different for the four groups of candidates. This may result, for example, from their differential abilities in raising campaign funds or because of historical voting patterns. The existence of such asymmetries may be tested by modifying the original relationship as follows:

$$V = a_0 + a_1 INCD + a_2 CHR + a_3 CHD + b(CE) + e \quad (2)$$

The hypothesis of differences in overall effectiveness will be supported if the estimated values of the parameters a_1 , a_2 , a_3 are significantly different from zero.

A second source of asymmetry is differences in the marginal impact of campaign expenditures across the four groups of candidates. Thus, the parameter b may itself vary depending on the incumbency status and party affiliation of the candidate. We assume that differences in marginal impact of campaign expenditures can be modeled as follows:

$$b = b_0 + b_1 \text{INCD} + b_2 \text{CHR} + b_3 \text{CHD} \quad (3)$$

Now substituting equation (3) in equation (2) we get:

$$V = a_0 + a_1 \text{INCD} + a_2 \text{CHR} + a_3 \text{CHD} + b_0 \text{CE} + b_1 (\text{CE}) \text{INCD} + b_2 (\text{CE}) \text{CHR} + b_3 (\text{CE}) \text{CHD} + e \quad (4)$$

Equation (4) is the linear model shown in Table 1. Note that the parameters a_1 , a_2 and a_3 measure the extent of "mean shift" while parameters b_1 , b_2 and b_3 measure changes in the slope of the regression equation. Asymmetries in the relationship between V and CE can now be checked by testing the statistical significance of the estimates of these parameters.

TABLE 1

Linear Model

$$TV_i = a_0 + a_1 \text{INCD} + a_2 \text{CHR} + a_3 \text{CHD} + b_0 \text{CE} + b_1 (\text{CE}) \text{INCD} + b_2 (\text{CE}) \text{CHR} + b_3 (\text{CE}) \text{CHD} + e$$

Non Linear Model

$$TV_i = a_0 + a_1 \text{INCD} + a_2 \text{CHR} + a_3 \text{CHD} + b_0 (\ln \text{CE}) + b_1 (\ln \text{CE}) \text{INCD} + b_2 (\ln \text{CE}) \text{CHR} + b_3 (\ln \text{CE}) \text{CHD} + e$$

where:

- TV_i = logit - transformed variable of % votes received by a candidate
- CE = campaign expenditures of a candidate
- INCD = Incumbent Democrat
- CHR = Challenger Republican
- CHD = Challenger Democrat

The second model shown in Table 1 is developed in a manner analogous to the preceding discussion and the parameters of these models can be interpreted similarly. The difference between the two models is that they assume a different underlying functional relationship between CE and TV . The non linear model starts with the following relationship instead of the one shown in equation (1):

$$TV = a + b(\ln \text{CE}) + e \quad (5)$$

The linear model is commonly used in many marketing studies. Its drawback, however, is the assumption of a constant return to scale implicit in the linear functional form. In this model the change in votes polled due to a marginal change in the value of CE is the same for all values of CE . In the non linear model, on the other hand, the impact of a change in CE on votes depends on the value of CE . Consequently, the implied elasticity of the percentage of votes polled by a candidate with respect to change in campaign expenditures is different. Consider, for example, a candidate who is a Democrat and also an incumbent ($\text{INCD} = 1$, $\text{CHD} = \text{CHR} = 0$). For this candidate, the change in TV due to a marginal change in CE is $(b_0 + b_1)$, for the linear model. In the non linear model it is $(b_0 + b_1)V/\text{CE}$. In this mode the marginal change depends on the value of CE and TV . Given the lack of any previous evidence on the functional form underlying the relationship between expenditures and votes, we test both these alternative specifications rather than a priori selecting one of them.

Results

The results of estimating the two models are presented in Table 2. In general, the results confirm the presence of significant asymmetries in the relationship between campaign expenditures and voting patterns. Irrespective of the functional form, one or more of the parameters in the model are statistically significant at the $p = .05$ level. The asymmetries are caused by differences

across the groups in the overall level of effectiveness as well as by differences in the marginal impact of campaign expenditures on voting patterns. The models in each case fits the data very well. The adjusted R^2 value for the linear model is .83 and for the non linear model it is .85. These values, however, indicate the fit between the transformed actual and predicted values. To measure the true degree of fit an inverse transformation of the predicted logs odd ratios were performed. The correlation between these values and the actual percentage of votes polled by candidates was then determined. The Pearson correlations were .918 and .926 for the linear and the non linear model, respectively. To test the reliability of the results split-half tests were performed. The data were randomly split into two groups and the models estimated for the two groups separately. In each case the results for the separate groups were similar to each other and to the results for the overall sample.

TABLE 2

PARAMETER ESTIMATION OF THE MODELS

VARIABLE	LINEAR		NON LINEAR	
	Coefficient	t	Coefficient	t
a_0	-.7949	-3.659	.1215*	1.748*
a_1	1.0186	3.680	.4335	4.664
a_2	-.0977*	-.416*	-.6720	-7.265
a_3	-.0748*	-.324*	-.2349	-2.370
b_0	.0166	6.042	.4750	6.709
b_1	-.0099	-2.720	-.2205	-2.098
b_2	-.0099	-2.715	-.2184	-2.079
b_3	.0001*	.039*	-.0053*	.053*
Adjusted R^2	.823		.838	

* Not significant at $p=.05$ level. All other coefficients are significant at this level.

The impact of party affiliation and incumbency status on the effectiveness of campaign expenditures can be judged from the estimated values of the different parameters. As mentioned earlier, there are two ways in which such asymmetries can arise. The parameters a_1 , a_2 and a_3 measure the difference in the effectiveness of campaign expenditures by incumbent Democrats, Republican challengers and Democratic challengers respectively from that of Republican incumbents. The parameters b_1 , b_2 and b_3 , on the other hand, measure the differences in the marginal impact of campaign expenditures.

Parameter a_1 is positive and statistically significant at $p=.05$ level in both models. This indicates that Democratic incumbents have an advantage over their Republican counterparts. Campaign expenditures by Democratic incumbents have a greater effect on votes than campaign expenditures of incumbents affiliated with the Republican party. The parameters a_2 and a_3 measure the difference between the two challenger groups from Republican incumbents. These parameters are negative in both models. Only in the non linear model, however, they are statistically significant from zero. The non linear model results suggest that campaign expenditures by challengers, whether Democratic or Republican, are less effective than those of the base group (Republican incumbents). Thus there is significant advantage associ-

ated with incumbency and this advantage extends further for Democratic incumbents. The advantage of Democratic incumbents in the sample is also evident in the linear model. However, in this case, the Republican incumbents have no advantage over challenging candidates.

In addition to asymmetries in overall effectiveness, the marginal impact of changes in the level of campaign expenditures also varies among the groups. The magnitude and direction of these differences exhibit a number of interesting patterns. First, the parameter b_3 is statistically insignificant in both models. Since this parameter is associated with the Democratic challenger group, this implies that there is no difference in the marginal impact of changes in campaign expenditures by Republican incumbents and Democratic challengers. Second, in both models b_1 and b_2 are significantly less than zero. Compared to Republican incumbents, the marginal impact of expenditures by Democratic incumbents and Republican challengers are significantly less. Moreover, the magnitudes of these two parameters are very similar in both the linear and non linear models. It is interesting that the marginal impact of campaign expenditures does not vary significantly for the groups of candidates who would oppose each other in an election -- Republican incumbents versus Democratic challengers and Democratic incumbents versus Republican challengers. The marginal impact for the first pair, however, is significantly greater than that for the second pair.

Discussion and Conclusions

Based on the sample of Congressional elections included in our study, there are significant asymmetries in the impact of campaign expenditures on election outcomes. These asymmetries are related to the incumbency status and party affiliation of the candidates. The study identifies two sources of these asymmetries. First, there are differences in the overall level of effectiveness of campaign expenditures. Second, the marginal impact of changes in expenditures on voting outcomes differ among the groups. That is, incumbency status and party affiliations affect the elasticity of votes with respect to campaign expenditures.

In general, campaign expenditures by incumbents are more effective than those by challengers. Democratic incumbents, especially, enjoy considerable "market power". Our result is consistent with that of Soley and Reid (1984) who found similar advantages for incumbents in the 1974 and 1976 elections to the U.S. Congress. The finding is also consistent with the general argument that early entrants in a market have considerable advantages over later ones because of familiarity and loyalty.

The effectiveness of expenditures by incumbents is also moderated by their party affiliations. Democratic incumbents, in our sample, have an advantage over their Republican counterparts. On an average these candidates received 65.3% of the votes compared to 61.2% obtained by their Republican counterparts. The added advantage of Democratic incumbents may be related to the length of their incumbency. Unfortunately, unavailability of information precluded a formal test of whether the effectiveness of campaign expenditures varied with length of incumbency.

Even after controlling for differences in the overall effectiveness of campaign expenditures, asymmetries appear to exist in the marginal impact of these expenditures. The statistical significance of the b parameters in our results indicates that the elasticity of votes with respect to campaign expenditures varies among the different groups of candidates. In this respect our results differ from those of Soley and Reid (1984). In their covariance analysis they found no significant interaction between campaign expenditures and incumbency status. Note that if incumbency status or party affilia-

tion of candidates were analyzed separately, there may be no interaction between campaign expenditures and these variables taken one at a time. Analyzing party affiliation and incumbency status jointly reveals an interesting pattern. As noted earlier, the marginal impact is higher for Republican incumbents and Democratic challengers compared to the two other groups. However, there is no significant difference in impact between these two groups. Similarly, changes in campaign expenditures by Democratic incumbents and Republican challengers have the same marginal impact. Thus, in any given election, changes in expenditure by either candidate would have a similar impact.

Our study is exploratory in that only a subset of elections were chosen for analysis. Results from a limited sample must always be interpreted with caution. Our findings do, however, point to significant asymmetries in the political market place. The consistency of findings from the two alternative models also adds to the validity of our results. Future studies of the impact of campaign expenditures on voting should probe further the nature of these asymmetries and their sources.

There are a number of avenues for extending our analysis. One interesting approach is to look at the dynamic patterns of fund raising and voting outcomes within a single framework. Presently, our analysis is essentially static. It looks only at the impact of campaign expenditures on voting patterns. A candidate's campaign expenditures, however, depend on his or her ability to raise funds. This aspect of electoral competition is rather neglected in many studies. An exception is the study by Chapman and Palda (1984) who propose a simultaneous equation model in which campaign expenditures depend, among other things, on the strength of the candidate's party and the closeness of the election. An alternative approach to linking fund raising abilities and voting outcomes is a time series model. In such a model, campaign expenditures are linked to past performance of the candidate's party and the closeness of the previous election. In applying this model, information for a series of elections from the same electoral districts is necessary. This will provide a better insight of the dynamics of the electoral process.

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DOES PATRIOTISM HAVE ANY MARKETING VALUE - EXPLORATORY
FINDINGS FOR THE "CRAFTED WITH PRIDE IN U.S.A." CAMPAIGN

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Abstract

This paper is an initial effort to report findings related to consumer response shown to "Buy-American" themes. It is hoped that it will encourage rigorous future research that would study marketing effectiveness of patriotic appeals. The findings of the exploratory study and opinion polls reported here point to growing protectionist attitudes.

Introduction

There has been growing conviction in the country, including the Congress, that some form of trade protection is needed for U.S. industries battered by foreign competition. The most visible of these industries has been the textile industry. At a time when most consumer goods have taken on an overriding aura of legitimacy in the eyes of the consumer the textile industry has been given a battle on two fronts. The first battle has been lost. The Textile Bill of 1985 that would place restrictions on textile imports has finally been vetoed by the President. The second front attempts to work directly on the final consumer by using a patriotic promotion campaign - "Crafted With Pride in U.S.A." - that would enhance long-term preference for U.S. made goods and therefore help slash textile imports. This approach was recommended to the industry after a nationwide study had been undertaken with consumers in 1981 (Dickerson 1981).

The "Crafted With Pride in U.S.A." campaign was launched in 1983 by the American Fiber, Textile, Apparel Coalition and the American Textile Manufacturers Institution (ATMI) to make consumers more aware of the country of origin of the textile products they buy. This campaign was projected at a \$10 million dollar annual budget (American Textile Manufacturer's Institute, 1984). Some of the themes used in this campaign have been the following: (1) American textile products represent the best total value in terms of quality, durability, style, and price; (2) the purchase of an American made good helps to save American jobs; (3) the community will prosper with money going back into the nation's economy. To aid people in spotting the "Made in U.S.A." label, ATMI lobbied for legislative aid. Effective December 24, 1984, a law passed declaring, "All textiles and apparel made in U.S.A." must bear such labels." (Crafted With Pride in U.S.A. Council, 1984)

The present study was undertaken to explore awareness and attitudes toward patriotic advertising using the example of the "Crafted With Pride in U.S.A." campaign. Its basic objective is to encourage future research that will shed light on the question, "How effective are patriotic appeals?"

A review of the literature indicates that there is no previous empirical research which studied the effectiveness of patriotic advertising appeals. Some writers have proposed that "Buy-American" themes represent admirable patriotism but have weak marketing value (Jackson 1983, p. 2).

In the following sections, the findings of this exploratory study will be discussed in conjunction with the findings of several nationwide polls which have reported about attitudes toward protectionism in general.

Methodology

This exploratory study was conducted in two locations in North Carolina. The first is Winston-Salem, which is in the urbanized Piedmont region. The economy of the city is largely dependent on international companies like RJR cigarette and Hanes textile companies. Greenville is closer to the eastern community of tobacco farmers. A telephone survey was used, utilizing a systematic random sample from the telephone book. Selected responses are reported in Table 1. Some of the significant differences between the two locations might be due to differences in sample size and other sociocultural differences not measured in this study.

TABLE 1: PERCENTAGE OF RESPONSES PROVIDED TO GIVEN STATEMENTS

	I. Location n = 90	II. Location n = 191
Favor greater limits on imports	74%	86%
Heard or seen an ad with theme "Buy-American"	77%	93%
Favorable reaction to "Buy American" theme	83%	99%
Heard or seen an ad with theme "Crafted With Pride in U.S.A."	62%	78%
Favorable reaction to "Crafted With Pride" theme	84%	100%
Consciously seek "American-Made" labels	42%	n.a.
Willingness to buy lesser-quality in order to limit imports of		
- clothing	32%	32%
- cars	23%	34%
Willingness to pay more in order to limit imports of		
- clothing	43%	92%
- cars	33%	92%
Education-college/graduate school	46%	50%
Proportion-female	51%	62%

Discussion

This exploratory research seems to support the generally held belief that the average consumer - especially in this geographic region hardhit by import - induced unemployment - supports protectionism. A very high percentage (82% weighted average) favor greater limits put on imports. This is considerably higher than the 1981 study by Dickerson where 55% favored the passing of stronger laws by government to limit textile imports (Dickerson 1981). According to a more recent nationwide poll conducted by the Wall Street Journal and NBC News, such limits were favored by 51% (Hume 1985, p. 1).

Consumers also appear to be highly aware of the issue of "Buy American." A vast majority has seen a television or heard a radio advertisement involving the "Buy American" theme. Still high but a somewhat lower proportion (73 percent compared to 88 percent) of respondents has been aware of the "Crafted With Pride in the U.S.A." campaign. An overwhelmingly favorable reaction was reported toward both "Buy American" and "Crafted With Pride in U.S.A." themes.

Only 42 percent of the respondents (this finding is available only in the first location) reported that they consciously sought "American-Made" labels. In the earlier Dickerson study (Dickerson 1981), 32.4 percent considered it "very important" that an item of clothing that they purchased was produced in the United States. In the Wall Street Journal/NBC News Poll, of the group of people who said they checked clothing labels to see where the garments were made, 76% said that they generally choose an American-made item over an import. Nevertheless, when the same persons were asked to name the two most important factors when shopping for clothes, the garment's origin finished a distant fourth (18%) behind "fit" (64%), "price" (32%) and "style" (25%) (Gilman 1985, Section 2).

On the average, 80% say that they would be willing to pay more for clothing needs and 76% say that they would be willing to pay more for cars in order to have limits on imports. Such tolerance is not shown, however, for buying lesser-quality clothing or cars in order to limit imports. Highly similar results have been reported by the Wall Street Journal - NBC News Poll (Hume 1985, p. 1).

Conclusions

There is a startling proAmerican sentiment revealed in the above exploratory study. This is partly due to the nature of its geographic location. However, other nationwide public opinion polls also have shown that protectionism is becoming a widespread attitude. It will be interesting to see whether this will turn out to be a long-term "grass roots" awareness or not. Furthermore, although patriotic appeals are beginning to achieve results in terms of generating awareness, it will be a much greater challenge to marketers to affect cognitive evaluations and behavioral response. Since consumers do not appear to be willing to tradeoff quality, future promotional campaigns will need to work on perceptions of quality.

Time seems ripe to evaluate the effectiveness of patriotic advertising appeals through empirical research. The following might be general recommendations and questions for future research:

(1) As the above studies suggest, a discrepancy exists between what people say they would do and what they actually do. Experimental or other research methodology common in advertising appeal research would be most useful to capture behavioral response to patriotic appeals.

(2) It would be appropriate to test the effectiveness of different tones of patriotic advertising. Which works better - optimism, confidence, challenge, anger, wounded pride, etc.? Does a highly visible patriotic tone for advertising help a product in getting higher attention for its other (product-related) messages?

(3) Is the "Crafted With Pride in U.S.A." campaign effective at the national scale? In terms of awareness, positive attitudes, inducing to people to look at labels of origin, and finally purchase?

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THE INFLUENCE OF COUNTRY OF ORIGIN ON CONSUMER ATTITUDE AND
BUYING BEHAVIOR IN THE UNITED STATES AND CANADA¹

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Abstract

Intercept surveys with consumers in Canada and the United States were conducted to assess the consistency of consumer attitudes with consumer behavior following the purchase of an apparel product. The results across cultures suggest that information on consumer attitude related to country of origin is not sufficient for making purchase assumptions.

Introduction

In 1985, the U.S. textile and apparel trade deficit reached 17 billion dollars, an increase of 25% over 1984, preceded by a 53% increase from 1983 to 1984 (U.S. Department of Commerce 1986). Textile and apparel imports were subject to both tariffs or explicit duties (averaging 22%) and quotas or quantitative restrictions. Munger and Rehbein (1984) estimated that the 1984 costs to consumers for this protection were \$19 billion for tariffs and \$4.4 billion for Multifiber Arrangement (MFA) related quota restrictions. The increase in imported textile products to Canada has also resulted in the demand for protectionist policies by the Canadian textile and apparel industries. Jenkins (1980) estimated that the 1979 costs to consumers for protection in the clothing sector were \$269.1 million for tariffs and \$198.3 million for bilateral quota restrictions under the MFA.

The economic impact of these policies on consumers is evident, but consumers' ability to influence the adoption or modification of these policies is much less obvious. For this reason, recent studies have attempted to measure consumer attitudes toward imported versus domestic apparel. Dickerson's study of 1,350 consumers in 32 states (1982), and Gallup and Roper polls in 1983 concluded that U.S. citizens are influenced by a garment's country of origin, preferring American-made apparel and finding it to be of superior quality (Consumers Prefer American-Made Merchandise According to Gallup and Roper Polls 1984). A Wall Street Journal/NBC News poll in 1985 also used a nationwide telephone survey and found that of the 53% of consumers (N = 1,573) who looked at labels, 76% generally chose domestically produced apparel (Gilman). Another 1985 nationwide telephone and mail survey (N = 2,435) conducted for the domestic industry concluded that "These findings again demonstrate clearly that most people prefer clothing made in this country" (Crafted with Pride Update 1985, p. 2). The existence of a large and growing trade deficit during this period raises doubts about the conclusions of these studies.

The findings of the early Dickerson study (1982) were the catalyst for the formation of the Crafted with Pride in the U.S.A. Council, a coalition of 245 domestic industry and labor organizations. The Council has already spent millions of dollars to promote American textiles with sophisticated media campaigns; an additional \$40 million advertising effort is planned for the next three years (Stars Join "Crafted with Pride" Campaign 1986). Two associated groups with many of the same members, the Fiber, Fabric and Apparel

Coalition for Trade and the Man-made Fiber Producers Association, Inc., spent more than \$1.8 million in the first nine months of 1985 in their lobbying and public relations efforts (Lobbyists' Spending Aimed at Tax and Textile Measures 1986).

No industry coalitions, on the scale of the U.S. Crafted With Pride Council, exist in Canada to promote domestically produced textile and apparel products. The nearest facsimile is the Think Canadian program initiated during the summer of 1984. Funded by the federal government's Department of Regional Industrial Expansion (DRIE), the program's mandate is to create nationwide awareness of Canadian-made goods. Unlike Crafted With Pride, the Think Canadian campaign is a comprehensive marketing program which is targeted at both the consumer and the industry segments.

Although consumer awareness was promoted by the use of national network television and print media at the beginning of the Canadian campaign, its major focus has been directed at mobilizing the private sector via the use of marketing seminars and special trade shows. The manufacturing and retailing sectors have been encouraged to clearly identify and promote domestically produced goods by using "Think Canadian" tags and labels, by featuring Canadian-made goods in advertising, and by drawing attention to Canadian products with point-of-purchase displays (DRIE 1984). Assistance to the apparel industry was provided by the Think Canadian program's sponsorship of regional designer and fashion associations in the 1986 Festival of Canadian Fashion.

Although the population of the U.S. is approximately ten times larger than that of Canada, the textile and clothing industries fulfill similar economic roles in their respective countries. The economic contribution of the U.S. textile and apparel industry is undeniable. The complex employs two million people directly, and one million more jobs are dependent on the viability of the sector. Wright and Kobel (1981) estimated that the Canadian textile and apparel complex employs approximately 200,000 people directly, and an additional 330,000 people are employed indirectly. The employment trend in both countries during the last decade has been one of steady decline, the losses due in part to the increase in imported apparel in the domestic markets.

Trade legislation and the expenditure of federal funds for activities such as technical assistance and the retraining and relocation of workers are important public policy issues which involve the allocation of national resources in Canada and the U.S. These are difficult decisions to make given the current economic and political climate in both countries. Legislators and those in policy making positions need as much information as possible in order to accurately assess the alternatives. Consumer input should be one of the variables considered.

A statement from the Consumers' Association of Canada (CAC) suggests that consumers are becoming more aware of the increasing costs of protection they must bear (CAC 1985). The question which remains to be answered is whether this knowledge will result in a demand for fewer import restrictions or in continued support for a protected domestic industry.

The purpose of this research was to test the assumption that consumer attitudes are accurately reflected in consumer behavior and to assess the consistency of consumer attitudes with consumer behavior following the

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purchase of an apparel product. Recent polls and surveys have attempted to measure consumer attitudes toward imported versus domestic apparel in the United States and have concluded that U.S. consumers are influenced by a garment's country of origin, prefer American-made apparel, and find it to be of superior quality. Apparel import statistics give rise to questions about these conclusions.

Review of Literature

Few research problems can so clearly identify a single point of origin as the one involving the relationship of attitude to behavior (A-B). This problem was first posed by La Piere (1934) and has been of interest to social scientists ever since. Whether, how, and under what circumstances attitude can predict behavior has become a research topic of burgeoning interest, particularly during the last two decades. Social psychologists are responsible for most of the work in this area, but the A-B problem is of interest to political scientists and economists as well, in part because this problem links theoretical issues to applied fields such as market research. Social psychologists usually study this issue on the micro level and look at the correlation between individuals' attitudes and their behavior. Political scientists and economists, in contrast, are usually more interested in aggregate predictions (Schuman and Johnson 1976). This may be an advantage since some researchers have suggested that while individual correlations are often low, attitudes may stochastically predict behavior en masse (Katona, Strumpel, and Zahn 1971).

Social psychologists have expressed concern that conclusions from social scientific research, which are primarily based on verbal responses, are strongly influencing social action programs primarily concerned with overt behavior (Deutcher 1966). Economists, interested in public policy and the expenditure of public resources, likewise should be concerned. To paraphrase Wicker (1969), caution should be exercised in making the claim that studies of verbal behavior are economically significant simply because the attitude objects are economically important. Most economically significant questions involve overt behavior, as well as people's feelings, and the assumption that these feelings will be directly translated into actions has not been consistently demonstrated.

Hundreds of studies designed to assess the relationship between attitude and behavior have been conducted since 1934, but their results have failed to yield a consensus among scholars in the field. For example, research has revealed everything from no relation between attitudes and behavior whatsoever (Corey 1937) to nearly perfect correlation observed in the context of voting behavior (Kelly and Mirer 1974).

Wicker (1969) reviewed 31 studies covering a wide range of subject populations, verbal attitude measures, overt behavior measures, and attitude objects. He concluded that "taken as a whole, these studies suggest that it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be closely related to actions" (p. 65). McGuire shares this view; after studying over a dozen reviews of empirical findings he concludes that only within quite limited circumstances do attitudes account for more than 10% of behavioral variance (1985).

Numerous reasons have been hypothesized for the apparent discrepancies in research findings. Situational forces (Hyman 1949), reference group pressures (Brannon et al. 1973), the strength, clarity, salience (Schuman and Johnson 1976), and accessibility of attitudes held (Fazio, Powell and Herr 1983) may all contribute to differences found. Direct experience and amount of information about the object may also play a

role (Fazio and Zanna 1981). Wicker suggests that extraneous events may intercede in the process (1971). Blackwell and Engel (1982) explain this in the context of consumer behavior:

Common sense ought to indicate that attitude alone cannot fully explain a complex behavioral act; yet this has often been the expectation. Consideration also must be given to the moderating effect of social pressure, economic circumstances and expectations, attitude toward the situation in which the behavior takes place, and a variety of other factors. Examples could be exposure to new information, opportunity to make brand choices, the influence of competing brands, the effect of store environment, price, and financial constraints, and family decision processes (pp. 443-444).

Objectives

In order to assess the relationship between consumer attitude and consumer behavior in an apparel purchase, the following objectives were formulated:

1. To assess at the point of purchase or as soon thereafter as possible, consumers' awareness of the country-of-origin of the apparel product just acquired;
2. To determine at the same point in time, consumers' attitudes toward imported versus domestically produced clothing;
3. To determine the salient factors which influence consumers' decision to purchase an item of apparel;
4. To determine the relationship between demographic variables and consumers' awareness, attitudes, and reasons for purchase;
5. To determine consumers' awareness of the Crafted with Pride and Think Canadian campaigns and the relationship between this awareness and their attitude and awareness of country of origin; and
6. To examine the variance in consumers' attitudes and awareness which may be related to differences in geographic location.

Procedures

Previous Work

The first phase of this study was begun in June 1984 in Ithaca, New York. Intercept surveys were completed with 507 consumers who had just purchased apparel. Three trained interviewers, working at different locations in an enclosed mall, collected data at various times of the day and on different days of the week. Consumers were questioned about their attitudes toward domestic versus imported clothing and their awareness of the country of origin of their purchase. Reason for purchase and demographic information were also collected.

A replication of the first study was completed in July 1985 in Utica, New York. Intercept surveys were completed with 525 apparel consumers. The second study was done in an effort to assess the variance which might be related to macro county demographics such as differences in family income, educational levels, and major employers. In addition, it was anticipated that a year of media attention on the trade deficit and the importance of buying American products might be reflected in consumers' awareness and attitudes. While some differences were apparent between the two populations, most were not statistically significant. In fact, the most significant finding was that the percentage of consumers who were both aware of the country of origin of their purchase and cared whether it was imported or domestically produced was exactly the same, 11%, in both samples.

Current Study

Methods for data collection which were tested in the exploratory stages of this research were utilized for the

second phase of the study. During the spring and summer of 1986 intercept surveys were conducted in Edmonton, Alberta, and at the two New York sites used in the previous study. A total of 505 consumers was surveyed in Canada and 953 in New York State. The instrument was revised slightly to include a question on awareness of the "Crafted with Pride in the USA" and the "Think Canadian" campaigns.

Questionnaire data from all collection sites were combined into one data base and analyzed using SAS procedures. Descriptive statistics were obtained; in addition, non-parametric methods appropriate for nominal and categorical data (e.g., chi-square) were used to explore possible correlations between variables. For example, the relationship of attitude towards imports and awareness of country of origin to age and sex of respondent, reason for purchase, and item purchased, were examined.

Results and Discussion

A total of 1,458 consumers were interviewed for this phase of the study, 505 in Alberta and 953 in New York. The breakdown by age and sex was similar in both samples (Table 1). Approximately three-quarters of the apparel consumers were females, and slightly over half of the total sample were in the 21 to 50 year age group.

TABLE 1

Sex and Age of Respondents

	Alberta		New York	
	F	%	F	%
Sex				
Females	365	72.3	713	74.8
Males	140	27.7	240	25.2
TOTAL	505	100.0	953	100.0
Age				
< 21 years	187	37.0	303	31.8
21-50 years	266	52.7	539	56.6
> 50 years	50	9.9	111	11.6
Missing	2	.4		
TOTAL	505	100.0	953	100.0

The two most common items purchased by this consumer group were slacks and shirts, slacks being the most popular item in Alberta and shirts in New York. The reasons given by consumers for the purchase of their garments showed similar response patterns. In both locations, "need" was the most frequent response, followed by "like" and "price." Since "need" tends to be a socially acceptable response, it was not surprising for this to be the most frequent answer. The response of "like" may involve one criterion or a complex of criteria used by consumers to assess the acceptability of their garments. It is of interest to note that while an expected important criterion such as "price" was identified to be a major purchase incentive, another criterion such as "quality" was not highly considered by this group. "Country of origin" as a reason for purchase was claimed by only one consumer in the U.S. sample.

A higher percentage of males than females in both countries said they knew where their garment had been manufactured (Table 2). In the Alberta sample, 25% claimed to be aware of the country of origin, while 20% of the New York consumers said they knew the production location. Larger differences between the samples were evident in answers to the question which asked consumers if they cared whether their garment had been domestically produced or was imported. Only 19% of the Canadian sample cared; 39% of the U.S. sample said they

did. Males and females in the New York sample were equally likely to say they cared, while male Alberta consumers were more likely to care than females by a margin of 10% (Table 2). Those consumers who said they cared that the clothing they bought was domestically produced were asked why in an open ended follow-up question. The most frequent response in both samples was because it was important to support the domestic industry and to buy domestically produced products.

TABLE 2

Awareness of and Concern with Country of Origin

	Alberta		New York	
	F	%	F	%
Awareness of Country of Origin				
Females	82	22.7	130	26.7
Males	45	32.4	64	18.2
TOTAL	127	25.4	194	20.4
Concern with Country of Origin				
Females	60	16.6	280	39.3
Males	37	26.6	92	38.3
TOTAL	97	19.4	372	39.0

Only a small number of consumers in each sample were both aware of the country of origin and cared that their purchase had been domestically produced, implying that they were searching for a Canadian or American-made garment. In Alberta 9.9% of the consumers were in this category; in New York, 11.7%. Earlier phases of this study yielded remarkably similar results. Eleven per cent of the New York consumers surveyed in 1984, and 11% of those interviewed in 1985 in a second location responded in this manner.

Two different but similar campaigns are being conducted in Canada and the United States to raise consumer awareness and to promote the purchase of domestic products. In the U.S., the Crafted with Pride campaign is sponsored by the textile and apparel sector and is targeted at the consumers of those products. American consumers interviewed for this study were asked if they were familiar with this campaign; 42% of the respondents answered affirmatively. The Think Canadian campaign deals with all Canadian-made products and is being sponsored and funded by the federal government's Department of Regional Industrial Expansion. More male consumers than female consumers (45% males versus 35% females; significant at the .05 level) were aware of the Canadian promotion, and the total, 38% was somewhat lower than the awareness level of the U.S. promotion by American consumers.

The lower awareness level of the Think Canadian campaign among Canadian consumers may reflect the different orientations of the two programs. The U.S. Crafted with Pride Council has employed intensive media campaigns to reach American consumers, while the Canadian marketing program is aimed primarily at mobilizing the private business sector. Also, because the Canadian effort is directed at all domestically produced goods, textile and apparel products have received proportionately less emphasis than those products promoted by the Crafted with Pride campaign.

The comprehensiveness of the Think Canadian campaign may be the reason why more male consumers were aware of the program. In contrast, awareness of the clothing oriented Crafted with Pride program was higher for female consumers than for male consumers. This may be related to the media campaign's target market and the fact that female consumers usually fulfill the role of family clothing purchaser. It should also be noted that the awareness level of the Canadian campaign may actually be less than

the reported 38%. The words "Think Canadian" are a literal translation of the program's objective. It is possible that some positive responses were based solely on the suggestive nature of the campaign slogan.

Chi-square analyses were done to explore possible relationships between the variables under study. For all tests, $\alpha \leq 0.05$. Significant relationships were found in both the New York and Alberta samples between sex and awareness of country of origin. In both cases, males were more likely to say they knew where their garment had been produced than the females sampled. A similar significant relationship was found in the Canadian sample between sex and concern that the garment had been produced domestically. Again, men were more likely to care than women.

The greater awareness of country of origin among male consumers may be the result of men reading clothing labels in order to gain information about a garment prior to its purchase. In terms of reason for purchase, "designer name" and "quality" were two characteristics chosen by an equal or greater percentage of males than females sampled. Reading labels in order to identify care instructions may also be an expected behavior of male respondents who are unfamiliar with laundering procedures and must rely on care labeling.

Age and awareness of country of origin were significant only for females in both countries. In the U.S., the oldest females were more likely to be aware than either the middle age group or the youngest women; in Canada, the middle age group (21-50) was the most aware, followed by the oldest age group. The least aware Canadian consumers sampled were women under 21 years of age.

Age and concern with country of origin were significant in both countries for both sexes. For Canadian females the pattern repeated that of age and awareness (middle, oldest, youngest). For American females, the oldest women were most concerned, with the middle age group next. Male age groups in both countries followed the same pattern as female age groups. That the oldest age groups in the American sample demonstrated the highest concern for their garments' country of production was not an unexpected finding. A 1985 Washington Post/ABC News survey of a random sample of 1,512 adults also found that elderly Americans were more likely than younger age groups to support the purchase of American-made products regardless of their quality (Behr 1985).

It was also anticipated that the oldest age group of Canadian consumers would care the most about buying domestically produced goods. Thus, the finding that respondents from the middle age group showed a higher level of concern was unexpected. A possible reason for this result may be that there is a growing interest among Canadians in their own fashion industry. The Festival of Canadian Fashion is an annual event that is held in Toronto. It was initiated in 1985 and drew a crowd of 50,000 fans during its first year. Although the Festival has some components of a trade show, it is also aimed at promoting the fashion industry to consumers. Since people within the 21-50 year age group are the major consumers of fashion, they are the target market for this Festival. Their concern for domestically produced garments may be a demonstration of their support for Canadian design talent.

As might be expected, awareness of country of origin and concern with place of production were related. Consumers in New York who were aware of the country of origin were more likely to care; however, of those consumers who said they cared, 70% did not know where the garment they had just purchased had been manufactured. The relationship was significant between these two variables in the Alberta sample, but the

direction was different. In this group of consumers, those aware of the country of origin were more likely to not care about the production location, whereas individual consumers who voiced the concern that their clothing be made in Canada were as likely to be unaware of the country of origin of their purchase as they were to be aware. The largest group of Canadian consumers (65%) were neither aware of their garment's country of origin nor cared if it were manufactured in Canada or elsewhere. In contrast, 52% of the American sample fell into this category.

In an attempt to assess the effectiveness of the promotional campaigns, relationships between awareness of country of origin and knowledge of the respective campaigns were explored. The relationship was significant in both countries. In New York State, consumers who were aware of the country of origin of their purchase were more likely (56% versus 44%) to be aware of the Crafted with Pride campaign. However, only 27% of the people who were aware of the campaign knew where the garment they had just purchased had been manufactured. The numbers were similar for this relationship in the Alberta sample. Only 34% of the consumers who said they knew of the Think Canadian campaign had looked at the country label in the garment just purchased. Similarly, 52% of the consumers who knew the country of origin also knew about the campaign.

The relationship between concern with domestic production and knowledge about the promotional campaigns was examined. Again a significant relationship was found in both countries. New York consumers who cared about the country of origin were evenly split between those who knew about the Crafted with Pride campaign and those who did not. However, of those who were familiar with the campaign, more than half (54%) did not care where their clothing was produced. In Alberta, this number increased to 74% of the sample. Of those who did care, the split resembled the New York sample, with 51% also aware of the Think Canadian campaign.

These findings suggest that both campaigns may have made some impact in terms of creating awareness among consumers. Over half of those respondents who looked at country of origin labels were also aware of the marketing program in their respective countries. However, only about one-third of each sample aware of the domestic patriotic campaign had also examined the garment label for country of origin. Lack of concern for where their clothing was produced was further exhibited when the majority of those who claimed familiarity with the program did not express a stronger preference for domestically produced goods. This suggests that while the two programs have succeeded in raising awareness, they have not influenced potential apparel buyers to actively seek information about a garment's country of origin prior to purchase.

Summary and Conclusions

The consistency of consumer attitudes with consumer behavior was assessed for two samples of apparel purchasers. Canadian shoppers in Alberta and American shoppers in New York State were asked about their awareness of and concern with their garments' place of production. Although differences were noted between the two groups, the lack of consistency between attitudes and behavior was a common phenomenon. In both cases, the percentage of those who searched for domestically produced goods because they cared about protection of the home industry was much lower than the percentage of those who expressed a concern for buying Canadian or U.S.-made clothing.

The somewhat high awareness level of domestic promotional programs suggests that negative attitudes toward imports may have been intensified by the patriotic nature of the campaign messages. This was especially true for the New York sample where knowledge of the Crafted with Pride campaign was almost equalled by the level of concern for protecting the domestic industry. In contrast, only half

as many Alberta respondents cared about purchasing domestically produced clothing than those who were aware of the Think Canadian campaign. There was only a difference of 4% (42% New York versus 38% Alberta) between the two groups' knowledge of their respective promotional campaigns. The percentage difference between samples for those who actively sought domestically manufactured apparel was only 2% (12% New York versus 10% Alberta). However, a difference of 20% (39% New York versus 19% Alberta) between samples was measured for those who expressed a concern for their garments' country of origin.

These findings may reflect a lack of concern by those Albertans interviewed to give the most socially acceptable response, in this case, an expression of national loyalty. Furthermore, the Canadian consumers sampled were more likely than the U.S. sample to be aware of their garments' country of origin. This suggests that the Alberta respondents may be consciously making those apparel purchase decisions which are most advantageous to them as consumers.

The intense media campaign by the U.S. Crafted with Pride in the USA Council also suggests that the level of concern for domestic clothing production may be influenced by the level of marketing effort. It is evident that a greater number of those interviewed in the New York study had attitudes that supported the appeal of the textile and apparel complex to protect domestic industry than respondents in the Alberta study. However, the Council's expected behavioral effect of raising the number of potential clothing buyers who actively seek out and purchase American-made apparel was not displayed by respondents in this study. Since it is consumers who ultimately make the final purchase decision, industry representatives and legislators should examine more closely the link between attitudes and action before making production and public policy decisions which will have significant economic effects on all parties concerned.

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TIME BUDGETS AND CONSUMER LEISURE-TIME BEHAVIOR:
AN ELEVEN-YEAR-LATER REPLICATION
AND EXTENSION (PART I - FEMALES)

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Abstract

A 1984 replication of a time-budget study conducted in 1973 is discussed. In terms of how people believe they would spend additional discretionary time, there is less variation noted between the two studies in the activities mentioned for filling "an extra two hours in my day" than in filling "a three-day weekend every week."

Background

This is a descriptive, atheoretical paper on the time-budget allocations reported in 1984 by a representative nationwide sample of adults and how those allocations differ from those reported in a very similar study conducted in 1973. Settle, Alreck and Glasheen (1978) addressed the time orientation of adults and how such focus (on dimensions of past/future orientation, and high/low activity, structure, and tenacity) translates into differing life-style patterns. Hendrix, Kinnear and Taylor (1979) proposed a preliminary model of how consumers allocate time based upon the constrained or circumscribed nature of time as an allocable resource as a function of a variety of anterior (uncontrollable in the short-run) conditions and the relative proportion of time-inelastic activities. Holman and Wilson (1980) built upon this conceptualization and an earlier one by Arndt and Gronmo (1977) to show how female consumers may use (reduce) time-elastic activities such as grocery shopping to increase their discretionary time. These two authors further develop their model (1982) and provide an AID3/MCA analysis in 1984 (Wilson and Holman 1984) in which it is shown that younger women (under 35) (as a proxy for stage in the Family Life Cycle) are more likely than women over 35 to strive to gain discretionary time through time-saving grocery shopping strategies. Hornik (1985) presented a conceptual model lending support to the notion that time devoted to shopping is likely to be a function of the Family Life Cycle, particularly with regard to the impact of increasing age and wages decreasing the amount of time spent in time-intensive shopping activities. Hendrix (1984) proposed seven antecedents and five consequences of the quantity of time allocated to a variety of activities.

The only other reported studies in the marketing/consumer behavior literature dealing with time-budgets with which the author is familiar, are those by Hendrix and Qualls (1981) in which they contrasted self-reported measures of household task responsibility with time diary (time budget) data, a paper on the changes in allocation of home activities as a result of purchase of a home computer (Venkatesh, Vitalari, and Gronhaug, 1983), the recent volume by Juster and Stafford (1985) discussed below, and several articles in the special issue of Journal of Consumer Research (JCR) (March 1981) dealing with the consumption of time.

In this JCR issue, two papers utilized time-budget data. Hornik and Schlinger (1981), using 1979 data from a nationwide probability sample, found an average television viewing time of 1083 minutes per week for females and 939 minutes per week for males. This is only slightly (15 percent and 9 percent respectively) larger than the 942 and 858 minutes per week (for females and males respectively) found by Hawes (1977) in 1973. They also found an average of 316 minutes per week (females) and 330 minutes per week (males) spent in reading newspapers; this compares with Hawes' (1977) 1973 finding of 306 minutes per week for both females and males. Jackson-Beech and Robinson (1981) compared television

viewers and non-viewers on a variety of dimensions based on a 1975 national probability sample of households (N = 1519). While time-budget category definitional differences (as well as others) preclude direct comparisons, it is noteworthy that their category of "domestic chores" averaged out to 21.7 hours per week, while Hawes (1977) found 22.8 hours per week spent in "housework, necessary home maintenance and lawn care" by females in 1973.

A very recent volume by Juster and Stafford (1985) of the Survey Research Center of the University of Michigan reports on 3 national time-budget studies conducted by that organization. They found very similar figures to those in the study reported herein for hours worked at your job for both males and females, for television viewing for both sexes, and in the decline in time spent in passive leisure pursuits.

Overview of the Study

The particular research questions driving the 1984 study which are addressed herein are:

1. How did Americans in 1984 allocate, on the average, their fixed weekly time budget of 168 hours, and how does this allocation pattern differ from that found in 1973?
2. How do these patterns vary across demographic categories and what changes within these categories have occurred since 1973?
3. How many hours per week were spent, on the average, in 1984 in a set of specific leisure-time activities and how has that number changed since 1973?
4. How has the pattern of preferred intended uses of extra "free-time" (2 hours-per-day or a 3-day weekend every week) changed since 1973?

Research Methodology

This study utilized data taken from a representative nationwide sample of 1650 households surveyed by Market Facts, Inc. (Chicago) during the late Spring of 1984. The particular households surveyed were selected from Market Facts 60,000+ household Consumer Mail Panel (CMP), and the sample was "balanced" on five variables so that the household demographic composition closely paralleled the continental civilian adult noninstitutionalized population as defined by the U.S. Census Bureau's Current Population Survey in March 1983. The five balancing variables were geographic region, population density, total annual household income, household size and age of female head-of-household.

The 1650 household sample was comprised of 872 households in which the female head indicated she was married, and 778 households in which the female head indicated a non-married status. The male questionnaire was sent to the 872 "married" households. A total of 1090 female questionnaires were returned for an overall response rate of 66 percent. Of these, 605 returns came from "unmarried" household (78 percent return), and 485 returns included both a female and a male questionnaire (56 percent return).

The final questionnaire requested, in addition to other items, information on:

1. Approximately how many of the 168 hours in a week the respondent spent in each of 17 listed activities during the "average" week.
2. What the respondent would do with an extra two hours in their day, and with a three-day weekend every week. The respondent was given a list of 35 possible activities from which to choose and could choose as many as desired under each (either) of the two situations.

Findings of the Study

Table 1 compares the mean hours per week spent in different activities, by females and by males, in both 1973 and 1984. It should again be noted that all figures represent all female respondents or all male respondents -- including therefore both participants and non-participants in a given activity.

TABLE 1
MEAN HOURS PER WEEK SPENT BY RESPONDENTS
IN INDICATED ACTIVITIES
1973 vs. 1984

Activity	FEMALES				MALES			
	1973 (N = 603)		1984 (N = 1090)		1973 (N = 512)		1984 (N = 485)	
	Mean	% of 168 hrs	Mean	% of 168 hrs	Mean	% of 168 hrs	Mean	% of 168 hrs
Sleeping, napping ^{c,e}	51.4	30.5%	49.8	29.5%	51.1	30.5%	51.7	30.5%
Eating meals ^b	11.7	7	12.0	7	11.5	7	12.0	7
Personal care ^b	8.2	5	8.1	5	6.7	4	7.4	4.5
Working at your job ^{b,c,d,e}	15.6	9.5	25.6	15	41.0	24.5	32.4	19
Commuting to/from work ^{b,c,d,e}	1.9	1	2.7	1.5	4.6	2.5	3.7	2
Other direct work-related activity ^d	2.7	1.5	2.3	1	3.3	2	2.3	1.5
Housework, necessary home maint. and lawn care ^{b,c,d,e}	22.8	13.5	15.8	9.5	5.7	3.5	8.1	5
Shopping ^{b,c}	4.2	2.5	4.1	2.5	1.9	1	2.3	1.5
Education (incl. class time, home- work time & related travel time) ^c	-	-	1.4	1	-	-	.7	.5
Playing with or helping your children ^{b,c,e}	10.2	6	5.6	3.5	5.0	3	4.3	2.5
Reading newspapers and magazines ^{d,e}	5.1	3	6.1	3.5	5.1	3	6.5	4
Watching television ^d	15.7	9.5	15.6	9	14.3	8.5	17.2	10
Hobbies, games, crafts, etc. ^{b,e}	5.6	3.5	4.5	2.5	4.1	2.5	3.9	2.5
Visiting with friends, relatives, socializing ^b	6.0	3.5	5.7	3.5	4.7	3	5.1	3
Participating in sports & outdoor recreation ^{b,c,d,e}	1.3	1	1.9	1	1.9	1	3.0	2
Attending sporting events as a spectator ^c	.7	.5	.7	.5	.9	.5	.9	.5
Entertainment outside the home (other than sporting events) ^{c,d,e}	3.2	2	2.5	1.5	3.2	2	1.9	1
		99.5%		97.0%		98.5%		97.0%

^a Percentages rounded to nearest 0.5%

^b Difference between 1973 male and female means significant at .01 level or greater (Z-test, 2-tailed).

^c Difference between 1984 male and female means significant at .01 level or greater (*).

^d Difference between 1973 and 1984 male means significant at .01 level or greater (*).

^e Difference between 1973 and 1984 female means significant at .01 level or greater (*).

Using the activities from "reading newspapers and magazines" to the end of the list as defining leisure-time pursuits for the purposes of this study, we note that the total number of hours spent by females in these activities did not change appreciably -- 37.6 hours in 1973, 37.0 hours in 1984. The situation for males, however, was quite different. The total for mean hours spent by males in these activities increased from 34.2 hours to 38.5 hours -- a 12.5 percent increase. This increase was paced by a 3.5 hour increase in reading, a 2.9 hour increase in television viewing and a 1.1 hour increase in participating in sports and outdoor recreation. The largest decline over the period was in non-sports-related entertainment outside the home. (Note: Refer to the footnotes to Table 1 for the indicants of statistically significant differences between the means). While the numbers differ (due to categorization differences, no doubt), the fact that men in general have more leisure-time per week than women is supported by a Louis Harris survey reported by Adams (1984).

As with the males, significantly more time was spent per week by females in 1984 in reading, and participating in sports and outdoor recreation and less time in non-sports-related entertainment outside the home. Females

also decreased their time expenditures on hobbies, games and crafts.

The higher participation rate of women in the labor force in 1984 over that in 1973 is reflected in this data. Similarly, the overall declining trend in hours worked per week by males as reported by Hedges and Taylor (1980) is seen in this data. The decline in male hours of market work and increase in equivalent female hours agrees with the trend implicit in Stafford's (1980 p. 57) comment that, "...overall, women's hours of market work continue to approach those of men."

Sociologists have noted that "Employed mothers do spend only about half as much time as full-time housewives in the company of their children...", and this is reflected in the very significant drop in the reported mean hours per week spent with children (Waite 1981 p. 17). Similarly, the decline in the hours spent by both working and non-working women in housework, et. al., and the increase in the time spent on housework by men has been well documented (Stafford 1980; Russell 1985; Dunn 1985; Prescott 1983). Russell (1985 p. 25) cites a study done by Michelson in 1980 in which it was found that married women who work full-time spend only two hours per day on average in housework (not including child care), while women who work part-time spend four hours on housework each day, and full-time housewives spend an average of five hours per day on this activity.

Tables 2 and 3 display the mean hours per week spent by all females in 1984 and 1973 respectively in the seven activities deemed to be essentially leisure-time activities and the activity "playing with or helping your children." Clearly this latter activity could be seen by some as a discretionary, leisure-time activity and by others as a mandatory "chore" and hence not truly discretionary.

The decline in amount of time spent with children previously noted is shown to be most pronounced among those women in the youngest age category, who are either a high school graduate or a college graduate, who are employed part time or are self-employed, who have either 1 child or who are single parents with two children, and/or who live in central city areas (with those living in rural areas close behind.)

The increase in readership of newspapers and magazines is most evident in the oldest age category, among those with less than a high school education, employed less than full-time, and/or living in central city areas. The decline in time spent on hobbies, games and crafts is greatest among those in their early 30's (plus or minus), those with "some college", those in a household of 3 persons, and/or those living in "urban" areas.

There was no significant difference in the mean hours per week spent in visiting with friends and relatives, or in attending sporting events between 1973 and 1984. The increase in the time spent participating in sports and outdoor recreation is clearly noticeable among those in their early 30's (plus or minus), with either "some" college or a college degree, full-time homemakers, and/or in households of two people. The decline in time spent in entertainment outside the home (other than sporting events) is highest among those in their early 50's (plus or minus), those with "some" college, those in households of 5 or more, and/or those living in rural areas.

It is interesting to note that the reported hours spent watching television by females "did not" change between 1973 and 1984, averaging some 2.24 hours per day (Table 1). This figure is considerably below the Nielson reported figure of 6.5 hours per day for the period between September 1982 and August 1983 (Brown 1984; Nielson 1985), but very close to the male/female figures of 2.16/1.98 and 2.21/1.84 hours per day for 1975 and 1981 (respectively) reported in Juster and Stafford (1985). In this author's estimation, the Nielson/Arbitron figures are overstated as they record

(either by diary or meter) the time the set is "on" -- not necessarily when it is being viewed by the male and female heads-of-household (as opposed to children or visitors). The tendency for people to overreport watching network stations to the detriment of independents has apparently been a longstanding problem (Beville 1985). Nielson and Arbitron diary-reporting has long been criticized on a variety of grounds (Beville 1985).

TABLE 2
MEAN HOURS PER WEEK SPENT IN SELECTED TIME BUDGET
CATEGORIES BY DEMOGRAPHICS - ALL FEMALES (1984)

AGE	N	Playing with or helping your children	Reading newspapers and magazines	Watching TV	Hobbies, games, crafts, etc.	Visiting with friends/relatives	Participating in outdoor recreation	Attending sports events as a spectator	Entertainment outside the home (other than sporting events)	TOTALS ^c
Less than 30	(155) ^a	11.7	4.1	14.2	3.9	6.3	2.5	.8	3.0	34.7
30-39	(233)	10.0	3.9	12.6	2.8	5.3	2.4	1.0	2.7	30.6
40-49	(166)	5.4	4.6	13.4	4.3	4.9	1.6	.7	2.3	31.8
50-59	(193)	3.0	6.3	16.7	4.9	5.3	1.7	.3	1.6	36.7
60 and over	(343)	1.2 ^b	9.2	19.0	5.8	6.6	1.5	.7	2.9	45.7
1090										35.9
EDUCATION										
Less than H.S. grad	(84)	5.1	7.4	18.6	4.6	5.3	1.7	.7	1.4	39.7
H.S. grad	(435)	5.9	5.8	18.1	4.9	5.8	1.4	.8	2.6	39.5
Some college	(321)	6.7	6.2	13.6	3.7	5.7	2.1	.8	2.6	34.6
College grad or post-grad	(250)	3.8	6.0	13.2	4.8	5.8	2.5	.5	2.7	33.4
1090										36.3
TOTAL HOUSEHOLD INCOME										
\$10,000 - 14,999	(237)	4.3	7.6	18.0	4.6	6.3	1.7	.7	2.3	41.2
15,000 - 19,999	(209)	4.9	6.3	18.7	5.0	5.4	1.5	1.0	2.2	40.0
20,000 - 29,999	(292)	5.4	5.7	15.0	4.7	5.9	1.8	.7	2.7	36.0
30,000 - 39,999	(184)	7.9	5.3	14.2	4.3	6.2	1.8	.8	2.7	35.0
40,000 and over	(168)	5.6	5.9	13.3	3.9	4.7	2.6	.5	2.7	33.5
1090										37.1
EMPLOYMENT STATUS										
Works full-time	(599)	5.1	4.8	12.9	3.6	5.0	2.0	.7	2.6	31.5
Works part-time; is self-employed; is not employed because is retired, student, disabled, etc.	(332)	3.7	7.8	18.0	5.3	6.2	1.7	.6	2.6	42.1
Full-time homemaker	(199)	10.2	7.2	19.6	5.8	7.2	2.0	.8	2.2	44.8
1090										39.5
HOUSEHOLD SIZE										
1	(282)	7.7	16.4	4.8	6.6	1.9	.6	3.0	41.0	
2	(393)	2.6	6.5	16.8	4.9	5.7	2.1	.6	2.8	39.3
3	(184)	8.2	4.7	15.1	3.9	5.2	1.6	.7	1.8	33.0
4	(132)	14.2	4.2	13.7	4.2	5.1	1.9	1.1	1.9	32.0
5 or more	(98)	14.7	4.9	12.8	4.0	5.3	1.5	.9	2.4	31.8
1090										35.4
POP. DENSITY/DEGREE OF URBANIZATION										
Rural	(282)	5.3	5.5	16.5	5.3	5.9	1.8	1.1	1.9	38.0
Urban	(461)	6.5	6.1	15.1	4.4	5.6	1.9	.6	2.2	35.9
Central city	(347)	4.6	6.6	15.7	4.0	5.8	1.9	.5	3.4	38.0
1090										37.3
overall average 37.0										

^a Number of respondents in the demographic category segment. Cell values in the table are mean hours-per-week "on the average."
^b The N for this mean was 58
^c Totals exclude time spent "playing with or helping your children"
^d The N for this mean was 35

The publication Social Indicators III notes that not specifically collecting data on television viewing as a secondary (background) activity can understate the time which a TV set is on by 35 to 45 minutes per day (Bureau of the Census 1980 p. 528). The statement is also made that "The Nielson figures are probably inflated because people often report watching an entire program when they, in fact, have seen only a portion of a particular show" (Bureau of the Census p. 529). In fairness, it should also be noted that the 1973 and 1984 surveys reported on here were both conducted during the May-June period. According to Social Indicators III, this period of the year is close to the lowest point in hours-per-day of television viewing over the course of the year. Respondents likely were using this period as the base for their estimated per-week viewing. The net relative constancy in female TV viewing is probably a function of both higher workforce participation and the general upward trend in TV usage per day noted by Nielson (1985).

As a partial validity check on self-report "averaging" method used in this study and its predecessor in 1973, a much more elaborate time diary study conducted by the University of Michigan's Survey Research Center in 1975 found an overall average of 15.2 hours per week spent in watching television or a primary activity (Robinson 1979 p. 43). (This compares with an overall female plus male average in the 1973 study by this author of 15.0 hours

per week (Table 1)). Of course, there are many caveats associated with the self-reporting of any behavior.

TABLE 3
HOURS PER WEEK SPENT IN SELECTED TIME BUDGET
CATEGORIES BY DEMOGRAPHICS - ALL FEMALES (1973)^b

AGE	N	Playing with or helping your children	Reading newspapers and magazines	Watching TV	Hobbies, games, crafts, etc.	Visiting with friends or relatives	Participating in sports or athletics	Attending sporting events as a spectator	Entertainment outside the home (other than sporting events)	Other major activities	TOTALS ^c
Less than 25	(127) ^a	18.4	3.7	18.6	5.1	9.0	1.7	1.1	3.9	1.6	43.1
25 - 34	(140)	14.9	4.1	16.2	5.1	5.6	1.1	.7	3.2	1.8	36.0
35 - 44	(92)	9.4	4.9	12.5	5.4	5.1	1.7	.9	3.4	2.3	33.9
45 - 54	(104)	5.1	5.7	13.5	5.4	4.5	1.4	.6	3.2	3.2	34.6
55 and over	(140)	2.1	7.3	15.9	6.9	5.1	.6	.4	2.5	2.2	38.7
											ave 37.3
Education											
Less than High School Graduate	(122)	8.1	4.6	18.3	5.6	5.8	1.4	1.1	3.3	1.4	40.1
High School Graduate	(268)	11.1	5.2	16.5	5.5	6.2	1.3	.6	2.9	1.8	38.2
Some College	(145)	10.8	5.3	13.1	5.9	5.9	1.0	.6	3.5	3.2	35.3
College Graduate or Post-Graduate	(65)	9.1	5.7	12.6	5.2	5.4	1.2	.7	3.8	2.8	34.6
											ave 37.1
Total Household Income											
\$ 4,000 - 9,999	(252)	11.7	4.7	18.0	6.0	6.8	1.5	.8	3.1	1.6	40.9
\$10,000 - 14,999	(199)	10.7	5.2	15.1	5.1	5.3	.9	.6	3.8	1.9	35.0
\$15,000 or more	(152)	7.1	5.8	12.5	5.8	5.5	1.4	.6	4.0	3.5	35.6
											ave 37.2
Employment Status											
Works full-time	(156)	4.5	4.2	12.5	4.2	4.4	1.1	.9	3.2	2.1	30.5
Works part-time; is self-employed; is not employed because is retired, student, disabled, etc.	(117)	9.0	5.7	14.3	6.3	6.5	1.7	.9	4.4	2.6	39.8
Full-time homemaker	(319)	13.5	5.4	17.4	6.0	6.6	1.2	.6	2.9	2.0	40.1
											ave 36.8
Household Size											
2	(250)	3.2	5.8	16.2	5.9	5.9	1.0	.5	3.3	2.4	38.6
3	(143)	16.4	4.3	16.6	5.9	7.1	1.7	1.1	3.4	1.7	40.1
4	(162)	15.8	4.9	15.1	5.1	5.5	1.3	.7	3.1	1.8	35.7
5 or more	(48)	8.9	4.7	11.8	5.0	4.1	.9	.7	2.9	3.5	30.1
											ave 36.1
Population Density/Degree of Urbanization											
Rural	(147)	10.2	4.5	14.5	4.8	5.8	1.1	.8	3.0	2.4	34.5
Urban	(266)	10.6	5.4	16.8	6.3	6.4	1.4	.7	3.4	3.9	40.4
Central City	(190)	9.7	5.2	15.0	5.3	5.4	1.1	.7	3.1	2.5	35.8
											ave 36.9
overall average											36.9

^a Number of respondents in the demographic category segment. Cell values in the table are mean hours-per-week "on the average."
^b Table adapted from Hawes (1976).
^c Totals exclude "playing with or helping your children" and "other major activities."

One of the most interesting findings that relates to the relative consistency over the 11-year period in hours spent watching television, is the essentially identical number of hours, on overall average, spent in the seven leisure-time categories by females in both 1973 and 1984. An average total of 37 hours per week was spent by female respondents in these categories of activities in both years. This figure is very close to the 41-43 hours reported spent by individuals in (undefined) leisure-time in a recent study of 1000 people of both sexes from all 50 states done by Research and Forecasts, Inc. for United Media Enterprises (Brozan 1983), and the consistent figure of approximately 45 hours per week in (undefined) leisure activities reported by Juster and Stafford (1985 p. 316-317) for both males and females aged 25-97 in both 1975 and 1981. The inclusion of respondents under 25 in this author's study may be a reason for the lower average here. The overall consistency is interesting and would appear to support the equilibrium model of time allocation proposed by Wilson and Holman (1984) and detailed in their earlier paper (Holman and Wilson 1982).

Women under approximately 40 years of age, paced by significant declines in television viewing and time spent visiting or in hobbies, showed the greatest decline in time spent on these seven leisure-time activities which undoubtedly reflects their higher workforce participation rate. Women in the oldest age group showed the largest increase in time spent in these categories of any age group. Full-time homemakers, paced by a 67 percent increase in the time spent participating in sports or outdoor recreation and a 33 percent increase in the time spent reading, showed the greatest increase in time spent of any of the employment groups.

Households of three persons showed the largest change -- a decrease of nearly 7 hours per week across the combined

seven categories. This decline was in large part a result of nearly 2 hour declines in weekly time spent on hobbies, etc. and in visiting, and a 1.6 hour (47 percent) decline in time spent in "entertainment outside the home..."

Usage of Additional Discretionary Time

Tables 4 and 5 contrast the 1973 and 1984 female responses to the questions "What would you do with an extra two hours in your day?" and "What would you do with a three day weekend every week?" respectively. It is noteworthy that the top three activities in Table 4 did not change over the eleven year period. Reflecting the decline in time spent on hobbies, etc. shown in Tables 2 and 3 and discussed above, there seems to be a distinct decline in interest in indoor hobbies and an increase in interest in outdoor hobbies (though not enough time to engage in them). Other notable changes are the decline in interest in "creative" activities, in shopping, in spending time with family/playing with children, and in school board/PTA activities; and increases in interest in gardening/landscaping, spending time on personal business/work engaging in athletics/physical exercise, and doing repair work on the home.

TABLE 4
PERCENT OF FEMALE RESPONDENTS INDICATING THAT THEY WOULD ENGAGE IN LISTED ACTIVITY "WITH AN EXTRA TWO HOURS IN MY DAY" (1973 vs. 1984)

Activity	1973 (N=603)	(Rank)	Difference Signif? ^a	1984 (N=1090)	(Rank)
Catch up on household chores, projects	61%	(1)	Yes	69%	(1)
Read, study	46	(2)	B	63 ^b	(2) ^b
Rest, relax, loaf, sleep	45	(3)		48	(3)
Spend time with family, play with children	45	(3)	Yes	37	(5)
Spend time on indoor hobbies	44	(4)	Yes	38	(4)
Spend time on "creative" activities	41	(5)	Yes	25	(12)
Listen to music, records, tapes	34	(6)		30	(9)
Socialize, visit friends	34	(6)		30	(9)
Spend time shopping	30	(7)	Yes	24	(13)
Do gardening, landscaping	30	(7)	Yes	36	(6)
Watch television	29	(8)		33	(7)
Spend time on personal business and errands	28	(9)	Yes	37	(5)
Spend time on outdoor hobbies	25	(10)	Yes	29	(10)
Walk, window shop	23	(11)		25	(11)
Attend movies, theater, concerts	23	(11)	c	37 ^c	(5) ^c
Go back to school, learn a trade or just learn something new	21	(12)		19	(15)
Work in service, community or charitable organizations	20	(13)		18	(16)
Engage in church-related activities	20	(13)		22	(14)
Engage in some form of individual athletic activity or physical exercise	20	(13)	Yes	31	(8)
Visit relatives	20	(13)		22	(14)
Drive around, go sightseeing	17	(14)		16	(17)
Do repair work on the house	15	(15)	Yes	24	(13)
Go to art gallery, museum	13	(16)		12	(18)
Go to ballgames, other sporting activities	9	(17)		10	(19)
Become more active in school boards or PTA	9	(17)	Yes	6	(22)
Go fishing or hunting	9	(17)		8	(20)
Join a social club	8	(18)		6	(22)
Engage in more political party activities	7	(19)		5	(23)
Go camping, hiking, backpacking	6	(20)		7	(21)
Become more active in youth groups (Scouts, Big Brother, etc.)	5	(21)		5	(23)
(Spearman rank correlation coefficient (rs) = .9337) ^d					

^a Difference between 1973 and 1984 percentages significant at .05 level (2-tailed).
^b This item was worded as shown in 1973 and as "Read books or magazines" in 1984, therefore direct comparisons are not possible.
^c This item was worded as shown in 1973 and split into two items in 1984: "Go to the movies" (21%) and "attend live theater (plays) or concerts" (16%). Again, direct comparisons are not possible.
^d This is significant at greater than the .001 level (2-tailed test).

Table 5 shows a 55 percent greater number of significant differences between 1973 and 1984 than Table 4. There is also much more change in the 1984 rankings of the top 12 activities in 1973. While weekend trips, sightseeing, and visiting relatives did not change very much in their rank ordering, they all showed a significant decline in the proportion of respondents expressing an interest in them. Visiting friends and socializing and spending time with family/playing with children not only dropped significantly in percentage expressing an interest, but also in rank.

Catching up on household chores and projects, doing repair work on the house, and gardening/landscaping (all essentially home property-related activities) all showed significant increases in both respondent percentage and

rank. Fishing, hunting, camping, hiking, and backpacking seem to have lost in allure to women over the eleven-year period. Perhaps they are using some of that time for shopping or for social-involvement activities (church or community/charitable organization) or for self-improvement (athletics/physical activity or going back to school).

TABLE 5
PERCENT OF FEMALE RESPONDENTS INDICATING THAT THEY WOULD ENGAGE IN LISTED ACTIVITY "WITH A THREE-DAY WEEKEND EVERY WEEK" (1973 vs. 1984)

Activity	1973 (N=603)	(Rank)	Difference Signif? ^a	1984 (N=1090)	(Rank)
Take weekend trips, visit places I've always wanted to see	70%	(1)	Yes	62%	(1)
Socialize, visit friends	56	(2)	Yes	40	(5)
Spend time with family, play with children	53	(3)	Yes	39	(6)
Drive around, go sightseeing	52	(4)	Yes	43	(3)
Visit relatives	48	(5)	Yes	42	(4)
Spend time on outdoor hobbies	45	(6)	Yes	37	(8)
Catch up on household chores, projects	43	(7)	Yes	56	(2)
Rest, relax, loaf, sleep	38	(8)		35	(10)
Go camping, hiking, backpacking	35	(9)	Yes	29	(12)
Do gardening, landscaping	31	(10)	Yes	38	(7)
Attend movies, theater, concerts	29	(11)	c	40 ^c	(5) ^c
Do repair work on the house	25	(12)	Yes	36	(9)
Spend time on "creative" activities	24	(13)	b	21 ^b	(15) ^b
Read, study	23	(14)	b	31	(11) ^b
Go fishing or hunting	22	(15)	Yes	16	(19)
Spend time on indoor hobbies	22	(15)		24	(13)
Go to art gallery, museum	20	(16)		21	(15)
Spend time shopping	19	(17)	Yes	24	(13)
Listen to music, records, tapes	18	(18)		16	(19)
Watch television	18	(18)		17	(18)
Walk, window shop	18	(18)		21	(15)
Go to ballgames, other sporting activities	15	(19)		19	(17)
Engage in some form of individual athletic activity or physical exercise	15	(19)	Yes	22	(14)
Engage in church-related activities	13	(20)	Yes	19	(17)
Spend time on personal business and errands	11	(21)	Yes	20	(16)
Work in service, community or charitable organizations	9	(22)	Yes	13	(20)
Go back to school, learn a trade or just learn something new	8	(23)	Yes	16	(19)
Join a social club	5	(24)		5	(22)
Become more active in youth groups (Scouts, Big Brother, etc.)	5	(24)		7	(21)
Become more active in school boards or PTA	3	(25)		2	(24)
Engage in more political party activities (Spearman rank correlation coefficient (rs) = .9395) ^d	3	(25)		4	(23)

^a Difference between 1973 and 1984 percentages significant at .05 level (2-tailed).
^b This item was worded as shown in 1973 and as "Read books or magazines" in 1984, therefore direct comparisons are not possible.
^c This item was worded as shown in 1973 and split into two items in 1984: "Go to the movies" (19%) and "attend live theater (plays) or concerts" (21%). Again, direct comparisons are not possible.
^d This is significant at greater than the .001 level (2-tailed test).

Conclusions and Implications

The findings discussed herein add support to a variety of social trends noted in the media and present actionable, if suggestive, implications for marketers engaged in the leisure-time "industries" of Tables 4 and 5. Marketers facing a decline in interest in a particular activity need to look behind the numbers and find out why. Those facing an increase in interest should not only find out why but also increase promotion and facilities.

The relative constancy of time spent in the leisure-time activities addressed would appear to support the equilibrium theory of time allocation noted earlier. Changes in male and female work and home roles are supported by the changes in a variety of the time-budget "activities." Men are "doing more" around the home; women more in the "work-world." It appears that print media have gained in the battle for women's time, while hobbies, games and crafts have lost "market share." Women in the "active years" are spending more time in outdoor active recreation and less time in out-of-home entertainment.

Sociologists will find further support in this data to explore the implications of the decline in interest in visiting friends and socializing (in certain demographic groups), and in the decline in time spent with

children. Is "quality time" sufficient to overcome a lack of quantity of time?

Extrapolation of these results to the U.S. population-at-large should be viewed with the usual caveats and cautions, of course, as the Market Facts, Inc. panel is not a purely random sample of the national population.

The importance of these results lies in presenting fresh data on time expenditures and leisure-time preferences in a manner comparable with decade old data. While the findings, per se, may not suggest any specific changes in marketing practice, they do lend support to at least one theory of time allocation and suggest (or support) various social trends. Further examination of time and leisure usage within specific subgroups of the population is the next step in attempting to clarify the role of time usage in models of consumer behavior.

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(Note: The author had to delete 125 lines of the original manuscript in order to fit within these 5 pages.)

COMPLEMENTARITY AND SUBSTITUTABILITY AMONG DISCRETIONARY ACTIVITIES WITH TIME-DIARIES

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Abstract

Complementarity and substitutability among discretionary activities was assessed using time-diary data. Complements were more commonly observed than substitutes, particularly within a priori defined subsets of activities. The difference in results obtained using amount of time from the time-diary approach and the frequency of activity from recall questionnaires was accounted for by the method-specific factors. Demographic variables and mean activity levels had a minimal impact on the complementarity and substitute relationships.

Introduction

Individuals' allocation of time has been an important issue studied by consumer researchers. As indicated by Holbrook and Lehmann (1981), the problem with many of the studies that have emphasized leisure time activities is that they have ignored the pattern of relationships between discretionary activities. In response to this problem, the present study will examine the complementarity and substitutability between discretionary activities with time diary data.

The definition of discretionary activities for this study will be those activities that an individual is engaged in for the intrinsic value. This excludes any activity that might be associated with normal work and domestic work inside or outside of the home. To study the relationship between discretionary activities, it is first necessary to define and describe complementarity and substitutability of activities. Henderson and Quandt's (1958) definition of substitutes and complements will be used for this study. Activities will be defined as substitutes if both can satisfy the same need of the consumer. They will be considered complements if they are consumed jointly in order to satisfy a broader need. For example, one might view participation in a tennis or badminton as substitute activities. Due to a limited amount of available discretionary time, an individual may have only enough time to participate in one of these activities to satisfy a leisure need. On the other hand, a person might be involved in both conditioning exercises and football jointly, with the motivation being to improve overall physical condition for playing better football. This reflects a complementary relation between conditioning exercises and football. Complementary activities need not occur at the same time (and they probably will not). Complementarity is defined over a time period such as a week, a month, or a year.

This study will use a correlational analysis approach to measure substitutability and complementarity between discretionary activities, similar to approaches used by other researchers (Bass, Pessemier, and Tigert 1969; Hendee and Burdge 1974; Holbrook and Lehmann 1981). To be consistent with the definition in the previous paragraph, negative correlation among activities will be defined as a substitute relationship. Hence, as more time is allocated to a particular activity, less time will be spent on substitute activities. A positive correlation among activities will represent a complementary relationship, indicating that the two activities are participated in jointly to satisfy a broader need. For example, one group of individuals might go to a movie in a certain time period and may not spend any time watching television. Another group of individuals might watch television for some time, but not go to a

movie. When calculated across all the subjects, the amount of time spent on television and movies will be negatively correlated and consistent with the definition of substitutes.

As previously noted, the complementarity/ substitutability relation among activities was examined by Holbrook and Lehmann (1981). One can expect, to some degree, that their findings were influenced by the sample used, the time period (1975) of data collection, and the recall questionnaire that was used. In particular, complementarity and substitutability among activities may vary based on the number of times (frequency) an individual reports being engaged in the activity (recall questionnaire), versus the number of minutes he or she indicates they spent on the activity during a given period of time (time-diary). Secondly, complementarity may vary based on the time span that is involved in assessing an individual's time allocation to discretionary activities. Activities that are substitutes over the span of one day may be complements over the span of one year. This study will attempt to explore these issues through the use of data that was collected with a time-diary as opposed to a recall questionnaire. In addition, the data having been collected in 1981 is more recent than the 1975 recall data.

In summary, the two objectives of this study are:

- 1) An examination of complementarity and substitutability among discretionary activities with time-diary data.
- 2) A comparison of the complementarity and substitutability relationship among discretionary activities that is derived from using a time diary versus a recall survey.

Methodology

Sample

A national sample of 444 individuals was used for this study. The data were collected by the Institute for Social Research at the University of Michigan in 1981. The multistage probability sample was designed to represent housing units in the United States, excluding those on military installations. The sample was collected from 74 randomly selected locations and were located in 37 states and the District of Columbia. These included the New York-Northeastern New Jersey and the Chicago-Northwestern Indiana consolidated areas, the 10 largest standard metropolitan statistical areas (SMSAs) outside of the two standard consolidated areas, 32 other SMSAs, and 30 counties or county groups representing the nonmetropolitan and less urban portions of the United States.

Method

Data collected with time-diaries for past studies have been based on a single 24-hour time period (Robinson 1977) or two 24-hour time periods (Nichols and Fox 1983). Obviously this limited sampling of time may be suspect. In order to reduce (not eliminate) this concern, the data for this study were collected over four waves (February-April 1981, May-June 1981, September-October 1981, and October-December 1981) with time-diaries. Respondents were requested to report their

time allocation for 24-hour spans of time. They reported this information four times during the year. The four times included two weekdays, a Saturday, and a Sunday.

EXHIBIT

SIXTY DISCRETIONARY ACTIVITIES GROUPED INTO A PRIORI SETS INCLUDING MEAN MINUTES PER WEEK PER SUBJECT

Set	Activity	Mean Minutes Per Week Per Subject
Audience Activities	Theatre, Concerts	9.08
	Television	814.56
	Movies	12.74
	Sports Events	19.53
	Museums, Exhibitions	1.56
Outdoor Activities	Skating, Skiing	2.95
	Jogging	2.89
	Swimming	4.05
	Hiking	0.65
	Hunting	4.80
	Walking (pleasure)	14.07
	Boating, Sailing	6.17
	Camping at Beach	6.15
	Team Sports	2.83
	Catching a Frisbee	0.02
	Fishing	10.38
	Gliding	0.95
	Pleasure Drives	8.99
	Bicycling (pleasure)	3.60
	Horseback Riding	2.39
Games	Board/Social Games	10.52
	Card Games	27.84
	Bowling, Pool	12.35
	Racquet Sports	4.23
	Golfing	12.53
Family and Social Activities	Fraternal Meetings	5.98
	Church Services	45.07
	Visiting with Others	247.72
	Phone Conversations	57.43
	Letter Writing	20.23
	Attending Parties	46.40
	Civic Involvement	16.66
	Sexual Activities	2.11
	Showing Affection	0.46
	Special Interest Meeting	17.45
	Political Meetings	4.26
	Religious Meetings	0.78
	Bars, Lounges	12.43
	Social Dancing	6.33
	Other Social Activities	13.50
Hobbies	Furniture Repair	4.14
	Playing an Instrument	3.72
	Collections, Scrapbooks	0.17
	Photography	0.57
	Carpentry	1.76
	Gardening	43.84
	Knitting, Needlework	41.25
	Art: Drawing/Sculpturing	4.28
	Singing	1.22
	Acting	0.16
	Dancing, Body Movement	0.40
	Eating Activities	Meals at Friends
Meals at Restaurants		134.00
Picnicking		4.01
Literary Activities	Reading Books	34.90
	Educational Classes	12.65
	Puzzles	10.88
	Literature	1.78
	Reading Magazines	19.70
	Reading Newspapers	111.55

The data collection started in Wave 1 with a personal interview and Waves 2-4 were conducted through telephone interviews. Based on the respondents self reports, a "synthetic week" was created. It reflects an estimate of the amount of time an individual spends on 223 activities for a period of a week (7 days). This is the same synthetic week data that Jackson-Beech and Robinson (1981) used in their study. Upon receipt of the time-diaries, the researchers coded the activities comprising time usage into one of 223 mutually exclusive and exhaustive activities, 60 of which were deemed discretionary activities and used in this study. These activities were chosen because they were similar, in some respect, to the discretionary activities selected by Holbrook and Lehmann (1981).

Sixty discretionary activities were grouped into the same a priori sets that were used by Holbrook and Lehmann (1981). These groups are presented in the Exhibit. In addition to time use, demographic information was collected (Table 1) for covariance analysis.

Analysis

For each of the 60 discretionary activities, the time in minutes was used to estimate pairwise correlation coefficients. The SAS routine was used to produce a simple correlation matrix. The correlation matrix was used as input into a Multidimensional Scaling Routine (MDS) on SAS. Metric and nonmetric versions were used to produce MDS maps.

TABLE 1

MEAN ACTIVITY AND DEMOGRAPHIC VARIABLES USED AS COVARIATES IN PARTIAL CORRELATIONS

Variable type	Survey Item	*Percentage significant
Continuous variables	Household Size	6%
	Age	13
	Education	11
	Family Income	16
	Mean Activity	31
Zero-one dummy variables	North Central large SMSAs	11
	Northeast large SMSAs	10
	South all areas	7
	North Central smaller areas	8
	West smaller areas	5
	Northeast smaller areas	6
	Home Ownership	6
	Work Status	11
	Urbanicity	2
	Ethnic	2
	Sex	10

*Percentage significant across 60 activities at the 0.05 level when each activity was regressed separately on all demographic variables plus mean activity level.

To counter the confounding effects of demographic variables and mean activity levels on the time spent on each activity, partial correlation coefficients were estimated. A similar use of partial correlations was performed by Holbrook and Lehmann (1981). For instance, older subjects might take more time to complete certain activities because of their infirmities. Alternatively, subjects who spend a lot of time in one type of social activity might spend a lot of time in other social activities. For instance, those with the demographic characteristics of "yuppies" might spend a disproportionately large amount of time on social activities. By holding these variables constant, unbiased measures of complementarity and substitutability are more likely to be obtained. Therefore, MDS solutions were produced

using simple and partial correlation matrices as the inputs.

To further study the effect of these covariates, four types of simple and partial correlations were defined, 1) simple correlations among activities (r), 2) partial correlations controlling for mean activity level (rcm), 3) partial correlations controlling for demographic variables (rcd), and 4) partial correlations controlling for mean activity and demographic variables (rcdm).

Results

Effect of the Covariates

The covariates that were hypothesized to have an effect on the correlation of activities are listed in Table 1. Each activity was treated as the dependent variable and was regressed with the covariates as the independent variables. A total of 60 regressions were run, one for each activity. The percentage of regressions where each covariate was significant is indicated in Table 1. Mean activity was the most significant variable. Family income was significant more often than any of the other demographic variables. The demographic variables used here appear to have a lower impact on time spent on each activity as compared to the annual frequency of the activity (as noted by Holbrook and Lehmann 1981).

Measure of Complementarity/Substitutability

The degree of complementarity/substitutability was assessed using simple correlation r and partial correlation rcdm. The pairwise correlations were classified as either those between activities within each of the 7 groups or between activities across different groups. Only those correlation coefficients that were significant ($p < .05$) are listed in Table 2.

Using a simple correlation measure, complementarity (positive correlation) was a little more common within the a priori defined sets (6.6%) as among the groups (5.6%). Substitutability (negative correlation) was less often observed (.66% and .5% for within and between sets). Complements were more often observed than substitutes. The results from using partial correlations rcdm were very similar, with complementarity observed somewhat more often within sets than between sets. When a lower level of significance was used to assess complementarity, the difference between the within activity set of correlations and between activity set of correlations was even higher. A closer review of the activities revealed that T.V. watching was a substitute for many activities. When T.V. watching was removed from the list of activities for analysis, the estimated level of substitutability fell further. Thus, in comparison to results obtained with recall data by Holbrook and Lehmann (1981), the proportion of both complements and substitutes were lower with diary data. In both approaches, more complements than substitutes were observed. However, unlike in the Holbrook and Lehmann (1981) study, the degree of complementarity in this study was less influenced by membership to the a priori defined sets of activities.

The number of complements observed is significantly more than what might be arrived at by chance. For an alpha level of 5% (used here) one might expect to see 2.5% complements and 2.5% substitutes. The percentage of complements observed is greater than this chance percentage in all categories in Table 2. The proportion of substitutes was, in general, less than 2.5%. Taking into account the chance factors, the true proportion of substitutes is probably even lower than observed. This bolsters the argument that complements were more commonly observed than substitutes.

One possible explanation comes to mind for this abundance of complement relationships. Prior to discussing this issue it would be helpful to review the

definitions of substitutes and complements. Activities are substitutes if both can satisfy the same need and they are complements if they are consumed jointly in order to satisfy some particular need.

One explanation for the abundance of complement relationships is grounded in the Economic Law of Diminishing Returns. One might view consumers as maximizing their utility by indulging in a variety of activities rather than in a single activity that has diminishing returns from excessive involvement. For example, let's say a person has 10 hours a week (one hour a day Monday-Friday and 5 hours on Saturday) for participating in discretionary activities where his primary need is physical fitness. Normally, he jogs from Monday through Friday during his lunch hour for a total of five hours a week. Even though he has an opportunity to jog on Saturday he prefers to go hiking for five hours because he is relatively bored with jogging and feels he will maximize his incremental utility by hiking. This will lead an investigator to conclude these are complement activities.

The simple r and partial rcdm correlation matrices were each analyzed using metric and nonmetric MDS procedures. The Kruskal stress and the correlation between input and output data for a 2 dimensional solution are reported for all four resulting analysis in Table 3. We used both measures because they are not exactly equivalent though similar. For instance, two MDS solutions with the same Kruskal stress value may have different correlation values. Nonmetric analysis of simple correlation matrix produced the best fit and was chosen for further analysis. The input-output correlation of .501 is slightly better than that obtained by Holbrook and Lehmann (1981). The choice of 2 dimensions was decided by calculating the input-output correlation coefficients from 1 through 6 dimensions. These correlations were, (1) .413, (2) .501, (3) .562, (4) .607, (5) .648, and (6) .684 corresponding to the dimensionality of the solutions. Marginal diminishing returns and the ease of interpretability resulted in choosing a 2 dimension solution (as also done by Holbrook and Lehmann 1981 albeit with a lower correlation coefficient for two dimensions). The 2 dimensional nonmetric MDS solution using simple correlation matrix is presented in Figure 1.

After rotating the MDS output to facilitate interpretation of the results, some commonality was observed between the dimensions here and in past studies (Bishop 1970; Holbrook and Lehmann 1981; Witt 1971). A visual examination of the horizontal dimension (x) suggests the distinction between indoor-social activities on the right (theatre, visiting, meals at friends, museums) and

TABLE 2
DEGREE OF COMPLEMENTARITY AND SUBSTITUTABILITY

Item	Within Sets Percentage Significant	N	Between Sets Percentage Significant	N
Significant at $p < 0.05$				
Positive				
Simple (r)	6.6%	303	5.6%	1467
Partial (rcdm)	7.5	293	6.1	1418
Negative				
Simple (r)	.66	303	.5	1467
Partial (rcdm)	1.30	293	3.3	1418
<u>With T.V. Watching Removed</u>				
Significant at $p < 0.05$				
Positive				
Simple (r)	6.6%	299	5.7	1412
Partial (rcdm)	7.6	289	6.4	1364
Negative				
Simple (r)	-	299	.2	1412
Partial (rcdm)	.7	289	1.7	1364

outdoor-individualistic activities on the left (fishing, walking, hiking). The vertical axis (y) has more sedentary activities at the top (books, magazines, phone) and more active pursuits at the bottom (camping, pleasure drives, skiing).

Television viewing is one activity that appears to be a substitute for almost all activities. The number of minutes spent on watching T.V. influences an individual's ability to spend time on other activities--a distinction that is not apparent from the data on frequency of television watching obtained with the recall procedure used by Holbrook and Lehmann (1981).

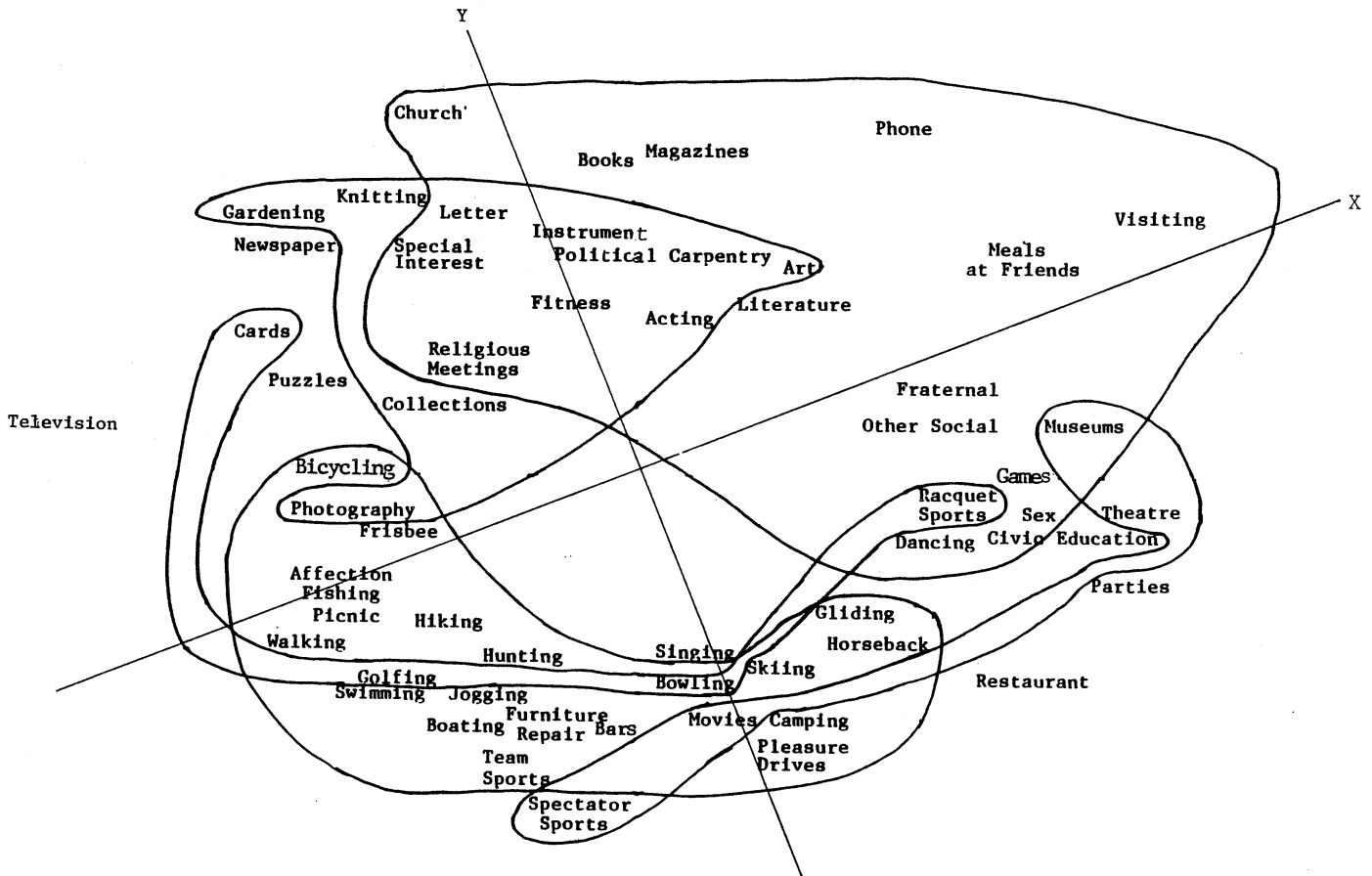
Most activities fit in the a priori clusters. The activities in the sets are somewhat different from those used by Holbrook and Lehmann (1981), and in some cases they are nominally similar but satisfy completely different needs. As an example, the eating activities set includes meals at friends, meals at restaurants, and picnics. One should not be surprised to find meals at friends near visiting and phone conversations, or eating at restaurants located near parties. These findings are consistent with McKechnie (1974). Likewise, discovering that a picnic falls within the outdoors activity set is noted by Witt (1971).

TABLE 3
COMPARISON OF ALTERNATIVE
TWO DIMENSIONAL MDS SOLUTIONS

	Kruskal Stress	Correlation Between Input and Output Data
Correlation Matrix Input Nonmetric	.381	.501
Metric	.412	.316
Partial Correlation Matrix Input Nonmetric	.396	.475
Metric	.410	.317

FIGURE 1

NONMETRIC MDS MAP OF ACTIVITIES USING SIMPLE CORRELATION MATRIX



Discussion and Conclusions

When using the diary method the results indicated most activities were neither complements nor substitutes. Further, complements were more plentiful than substitutes. Demographic variables and mean activity times influenced the estimates of complementarity.

The diary method produced results different from results obtained from a recall method. Bishop, Jeanrenaud, and Lawson (1975) report a good correlation between diary-based and recall-based time measures; however, comparison of the results in the current study with those of Holbrook and Lehmann (1981) indicate important differences do exist between the two procedures. First, demographic variables and mean activity times influence the correlations calculated from the two approaches differently. Part of the reason could be the systematic bias that results when subjects report on recall questionnaires. Recall information is typically obtained for the previous 12 months, and individuals may not be able to accurately remember how often they undertook an activity. Subjects with similar demographic characteristics might feel socially pressured to misreport the time spent on certain activities. Mean activity time may be positively related to certain activities within certain sets i.e., those who over-report their number of discretionary activities participated in, might systematically over-report all social activities but not other activities. With time-diaries, where activities are recorded soon after they are completed, these biases are less likely to influence reporting. Consequently, demographic variables and mean activity time that cause these biases, are less likely to be associated with activity time correlations, as observed.

The degree of complementarity using the diary method appears to be less than the degree of complementarity estimated using the recall method by Holbrook and Lehmann (1981). The difference in estimated complementarity appears to be related to the interval of observation. Many activities that are complementary for an individual over the course of a year (recall method) might be substitutes during the synthetic week. For instance, an individual is unlikely to participate in skiing and camping in a single day but over a year the individual who often skis in winter might camp frequently in the summer. Thus, the indication of fewer complementary activities observed in the diary method should not be viewed as a form of bias; rather, complementarity must be specified over a definite time period, with the time period determining the level of complementarity.

Another reason for finding fewer significant complementarity/substitutability relations with a time-diary is the higher variance associated with the time measures. As the time period of diary data is small, most activities are reported to have not been performed. The time spent on activities that are reported to have been performed far exceeds the amount of time spent on these activities in a typical week. For instance, if a typical subject spends one hour in one week of the month working in the garden, the average time spent on gardening each week is 15 minutes. Using a weekly diary, a fourth of the subjects will report spending one hour and the remaining subjects will report that they did not engage in gardening. Such reporting arbitrarily increases the variance of the estimates and consequently reduces the significance of the estimated correlation. Since complements and substitutes are defined only when significance of inter-activity correlation exceeds 95% ($p < .05$), fewer complements and substitutes are observed using the diary method.

Overall, it can be said that the two approaches, diary and recall, are alternate ways of looking at a problem

with each providing its own implications. Complementarity cannot be rigidly defined, but must be viewed in the context of the time interval. Classification of activities into rigid complement and substitute classes should give way to varying degrees of relationships that are conditioned by the needs of the researcher.

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COHORT ANALYSIS OF THE EXPENDITURE PATTERNS OF THE ELDERLY¹

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ABSTRACT

A regression-based cohort analysis procedure is used to study the trends in expenditures of the elderly and near elderly between 1969 and 1982. The data derive from the six Family Expenditure surveys conducted during that period. The results suggest that age is less important in predicting expenditures than is usually suggested. Instead the period of birth and the period in which the expenditures are made are far more important. In particular, cohort membership is valuable in understanding trends in many key areas, such as food, clothing shelter and transportation.

Introduction

Cohorts are groups of individuals who experience "the same event within the same time period" (Ryder, 1965:845). The term 'cohorts' is most commonly used to describe those who were born at the same time. They experience the same historical events at the same age. The purpose of this paper is to present the results of an exploratory analytical cohort analysis of expenditures data generated by the Consumer Expenditure Survey conducted by Statistics Canada. It focuses on the elderly and near elderly age groups because of the increased interest in recent years in the economic well-being of the older group. Understanding factors affecting their status is made more complex by the commonly experienced co-incidence of aging, change in life position (worker to retiree), and change in income level and source. Moreover, economic policies directed at the elderly population have been changing dramatically over the last decade so those becoming elderly at different times in the recent past have been experiencing substantially different economic environments. Analytical procedures designed to sort out the differential effects of these many interrelated factors seem worthy of examination, application and discussion.

An Overview of the Cohort Analysis Procedure

Different birth cohort groups experience different social, economic, political and technological environments. "Each cohort experiences a different set of environmental events at each stage of its life course than did each preceding cohort when it occupied the same life stage" (Rentz, Reynolds and Stoutz, 1983:12). Cohort analysis attempts to sort out the outcomes of commonalities of experiences in terms of what were the results of the shared experiences themselves and what were the results of the age at which they were experienced. To do this, different cohort groups born at different times but experiencing the same historical events (but at different ages) must be compared. It is difficult, however, to sort out the complex interactional effects of cohort membership, age and environmental influences. Single cross-sectional studies across different age groups at one point in time cannot unravel these interactions because the effects of age and cohort membership are confounded. So questions regarding behaviour patterns which differ across survey respondents in such studies cannot be answered as to whether these differences are attributable to how old the respondents were or to the period in which they were born. Longitudinal studies which use repeated measures of

either the same respondents or of sub-samples of the same population (cohorts), do not allow for distinguishing between age effects and the effect of the historical period all respondents shared. Even time-lagged designs comparing samples of the same age from different cohort groups at different times confound the effects of cohort and historical period.

Cohort analysis techniques address the problem of the confounding of variables involved in the efforts to sort out the effects of age vs. cohort vs. period. Essentially with normal procedures it is impossible because of the inherent interrelationship of age, cohort membership and time. For example, at any given point in time, there is only one cohort group at any specific age. To overcome this problem, a series of models was developed in this study for each expenditure category analyzed. The model outcomes were compared for interpretation.

To sort out the effects of each of the three factors under study - age, cohort membership and period - a series of constrained multiple regression models is used. (Mason 1973; Rentz and Reynolds 1980; Rentz, Reynolds and Stoutz 1983) They take the form:

$$Y_{ijk} = a + b_i + g_j + d_k + e_{ijk}$$

where Y_{ijk} = dependent variable (expenditure level on some category of goods or services)

b_i = the effect of the i^{th} period

g_j = the effect of the j^{th} age

d_k = the effect of the k^{th} cohort

e_{ijk} = error term

i , the period, ranges from 1 = 1969 to 4 = 1982

j , the age group, ranges from 1 = 57-60 years of age to 6 = 77-80 years of age

k , the cohort, ranges from 1 = born 1889-1892 to 9 = born 1922-1925

Since all the independent variables are dummy variable conditions, the regression actually reduces to an analysis of variance problem. However, the presentation of the results will use standard regression format for ease of interpretation and explanation.

To permit inclusion of all three sets of factors in the model, the linear dependency is reduced by constraining two effects to be equal at the same time within two of the three variable sets (age, cohort or period). The model results will vary with the choice of the factors constrained and the "suitability of the assumptions can be judged by how well each model fits the data", i.e., by the value of the R^2 (Rentz, Reynolds, Stoutz, 1983:14). Thus, for each expenditure category, three models were fitted and identified according to the unconstrained factor:

(1) a "period model" in which the oldest two age groups were constrained to be equal and the earliest two cohorts were so constrained,

(2) an "age model" in which the first two periods were constrained and the earliest two cohorts,

(3) a "cohort model" in which the first two periods and the oldest two age groups were constrained to be equal.

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The choice of pairs of factors to constrain was determined on the basis of data quality and interest. The most recent periods were of the most interest so they were not constrained. Also the earlier periods had substantially lower rates of inflation than the later periods. The earliest cohorts and the oldest age groups were the smallest sample groups, so were combined to improve the stability which affects the reliability of the results. Also, these earliest cohort groups will be the least affected by policy changes in the future as their numbers will decline very rapidly. Combining those over 73 years of age allows for the comparison of those under 65 (non-elderly) to those 65-72 (young-old) to those 73 and over (old-old).

The expenditure categories chosen for analysis included all major categories of expenditures reported in the Family Expenditure Survey publications as well as subcategories of particular interest given the group under study. (For a full explanation of the procedures of these surveys and definition of these categories, see Statistics Canada (1978).)

Analysis of expenditure data in this way can help sort out the sometime cumulative, sometimes counterbalancing effects of age, period and cohort. It can help answer such questions as "Do changes in health expenditures arise because as people age they need more health care services or because health care costs are rising rapidly over time or because people born more recently perhaps demand a higher level of care"? "Do food expenditures decline because as people age they eat less or because people born in earlier times know how to economize better on food purchases"? "Do people spend less on cars as they age because they can no longer drive or because the cohorts born in earlier periods are less used to cars"? "In general, do the elderly spend less because they are aging and perhaps need less because some costs, such as for government subsidized health care, for them are declining over time or because the cohort has less accumulated wealth and pension flows from which to draw"?

The exact reasons for the findings of period, age, or cohort effects, of course, cannot be determined directly from the analysis. Sometimes, the coincidence of historical events and period or cohort effects gives a strong indication of a causal or contributory link. Often theories regarding patterns of aging can contribute to a fuller understanding of the empirical results regarding aging effects.

As with many statistical analysis procedures, this method of cohort analysis is not without controversy. Glenn (1977) is concerned that the linear additive form of the regression model used ignores possible interaction effects. However, the procedure adopted here does allow for at least first level quantitative analysis while other procedures involving only visual inspection and interpretation yield rather vague outputs. More complex interactive term models could perhaps be explored in future work to examine for such interactive effects. Glenn does stress the need for interpretation of results in the light of "outside" information to confirm beliefs about what is observed in the data. This approach has been adopted here. Also the exact numerical level of the parameter estimates have not been stressed, but rather only the general direction of changes noted. The ease of explaining the significant findings provides support for the procedure and its usefulness in verifying trends which might be expected and in suggesting some new areas for explorations. Rodgers (1982a) and Jagodzinski (1984) suggest that the problems of analysis of age, period and cohort effects would be best served by eliminating one of the three variables. Rodgers (1982) feels that the underlying explanatory factors that are associated with the eliminated variable could then be substituted. For example, if the period effect is believed to be the result of period-related economic conditions, then some measures of the economic conditions themselves should be substituted. This argument is particularly appealing if the goal is one of understanding the phenomenon under

study, not just mathematically predicting it. However, the initial use of the Mason (1973) procedure can help to identify whether such underlying factors are best sought within age, period or cohort - related phenomenon.

SOURCE OF THE DATA

The data used for the regression models were average expenditure levels calculated on a subsample of households interviewed for the 1969, 1974, 1978 and 1982 Family Expenditure Surveys. The subsample contained households of single unattached individuals and married couples within the age range 57-80 years of age living in the eight cities of St. John's, Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton and Vancouver. The sample sizes varied between survey years but typically were well above 500.

Some changes have been made in the original data categorizations in order to ensure uniformity of classification of expenditures from survey year to survey year. Wherever possible all categories were brought into agreement with 1982 classification procedures.

RESULTS OF THE COHORT ANALYSIS

Table 1 lists the expenditure categories and overviews the analysis findings for both the percentage of total expenditures devoted to each category of expenditures and dollar values of these expenditures. For each expenditure category the best fit model with its significant coefficients, (excluding the intercept term) and their sign are listed. Since all models have the same number of variables, the best fit model is the one with the highest R^2 . This model in each case is identified with an asterisk in the table.

TABLE 1
Summary Table of Cohort Regression Analysis Results

Variable	Percentage of Total Expenditures			Dollar Expenditures		
	Most Significant Model	Significant Variables	Sign of Coefficient (+ or -)	Most Significant Model	Significant Variables	Sign of Coefficient (+ or -)
Food	C	P 4 A 1,2,4	- ALL -	P	P 2,3,4 C 8	+++
Shelter	C	P 3,4; A 2 C 2-9 (incl)	+ + - ALL -	P	P 2,3,4	+++
Rent	C	C 2-9 (incl)	ALL -	P	P 4	+
Owned Living Quarters	N.S.	---	---	P	P 2,3,4	+++
In Home Energy	P	---	---	P	P 3,4	++
Clothing	P	P 2, C 3,4	- ++	C	C 4,5,6,7,8,9	+++++
Women's Clothing	P	P 2,4 C 4	ALL - +	C	P 3 C 6,8	+ ++
Men's Clothing	A	---	---	C	C 4,5,6,7,8,9	+++++
Medical and Health Care	P	P 2,3,4	ALL -	P	P 2	+
Transportation	C	C 6,8	++	P	---	---
Car and Truck	C	C 4,5,6,7,8,9	ALL +	C	C 6,7,8,9	++++
Recreation	N.S.	---	---	C	A 1,2,3,4 C 4,5,6,7,8,9	++++ +++++
Personal Taxes	P	P 4 A 1,2,3	+ +++	C	P 4 C 6,7,8,9	+ +++
Security	C	---	---	C	---	---
Gifts and Charitable Contributions	P	P 2,3,4; A 1 C 5,6,7,8,9	ALL + ALL -	P	P 2,3,4	+++
Total Expenditures				P	P 2,3,4 C 8	+++ +

C - Cohort A - Age
P - Period N.S. - not significant

PERCENTAGES OF TOTAL EXPENDITURES

In general, the regression models were very good at explaining variations in percentages of expenditures devoted to categories except in the cases of 'Owned Living Quarters', and 'Recreation' expenditures. In

these categories the percent of expenditures levels were so variable that no good models were found and no further detailed discussion of these categories of expenditures is included.

With the exception of men's clothing, period and cohort models and not age models are the most explanatory models based on the measure of R^2 . Cohort models are best in explaining 'Food' expenditures, total 'Shelter' and the shelter subcomponent of 'Rent', 'Transportation', and the transportation subcomponent of 'Car and Truck Purchases', and 'Security' expenditures. Period models excelled in the areas of 'In-home Energy', 'Clothing' and 'Women's Clothing' and 'Medical and Health', 'Gifts and Contributions' and 'Taxes' expenditures.

FOOD

The data for this category has been plotted to aid in explaining the results and how they can be interpreted. Two graphs have been made of the data, one with lines joining the same age groups across years to highlight age factors (Figure 1) and the other doing the same for the cohort groups (Figure 2). Referring to Table 2, it can be seen that the cohort models were best. However, within these models, individual cohort variables did not emerge as important. In Table 1 it can be seen that the cohort groups do appear to have some pattern in the series of levels ranging from cohort 1 at the top with one data point, down to cohorts 8 and 9 at the bottom. However, there is quite a bit of overlap preventing any significant individual differences. Despite this overlap, there is a declining trend in percentage of total expenditures spent on food with later born cohorts. The significant differences from the base conditions were found mainly among the age ranges. In the cohort model the two oldest groups are constrained to be equal. As can be seen in Figure 1, this is an appropriate choice. The age differences show up dramatically, but not as individual age groups. Rather, there are three distinct groups - those over 73, the old-old; those 65-72, the young-old; and those under 65. However, the biggest jump is between those under 65 and those over. Age groups 1, 2 and 4 were found to have significantly lower percentage expenditures on food than the oldest two groups. Age 3 (65-68) probably failed to meet the criteria because of its somewhat greater variance and the very close proximity of its 1974 level to that of the oldest groups. A common sense interpretation of the plots suggests that there are real differences in a consistent way between the three age levels with the major shift occurring after age 65. Consumption changes in this

FIGURE 1

Food Expenditures as a Percentage of Total Expenditures by Age by Year

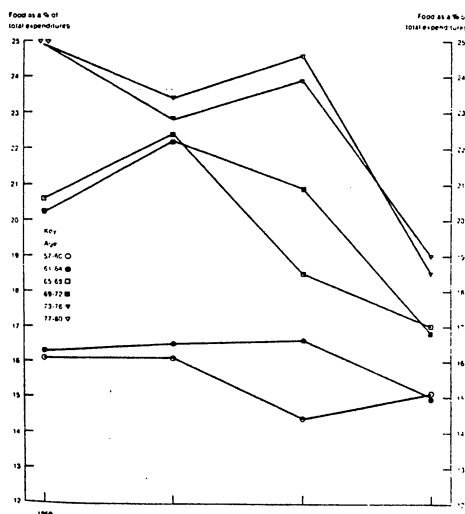
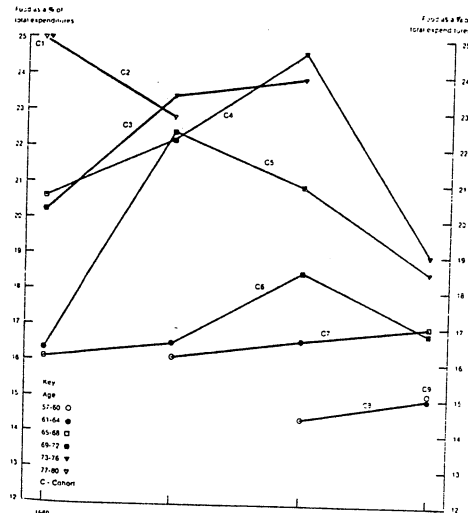


FIGURE 2

Food Expenditures as a Percentage of Total Expenditures by Cohort by Year



category come immediately upon retirement. There is a dramatic shift upwards in budget allocations to food. Those under 65 years of age spent four to eight percent less on food than seniors. Food is perhaps the key indicator of well-being. This sudden shift in percentage of expenditures devoted to this category clearly indicates a drop in living standard.

In terms of period effects, the last period shows a decline for almost all age and relevant cohort groups. Lower increases relative to incomes in food prices in the early 1980's would account for this drop. All groups spend significantly less as a percent in 1982 than in the base period, suggesting an improvement in living standards probably resulting from lower increases in food prices in the early 1980's relative to income.

No cohort groups were significant. There did not appear to be any impact on this category due to the period in which people had been born, raised, and raised their families (for example, no Depression mentality). However, the significance of the overall model and the trends noted in Figure 2 suggest that there is a trending down for cohorts in the proportions of budgets they have to spend on food. Why might this be? It could not be simple an effect of absolute age-linked individual income levels or price levels. These would show up as age or period effects. The explanation has to lie in something with sustained impact on the whole cohort. This may be a lifetime standard of living or relative income which has been rising with each cohort. Food does appear to be a key indicator of the impact of such shifts.

SHELTER

The overall 'Shelter' expense includes the categories of 'Rented Living Quarters' expenditures, 'Owned Living Quarters' expenses (mortgage interest, taxes, repairs and maintenance), and also expenditures for lodging away from home and utilities expenses. Overall 'Shelter' expenditures are best explained by the cohort model. All cohort groups spent significantly less than the base cohort group. An examination of the model coefficients (not reported here) it is almost an uninterrupted negative trend (see Heslop 1985). Also, the two periods in this model are significant, showing increasing percentages of total expenditures devoted to all shelter areas in the 1978 and 1982 period than in earlier periods. The very high interest rates during this period may be the cause of this shift, was well as rapid rises in utility costs.

No models were significantly useful in explaining variances in the 'Owned Living Quarters' expenditures. Rented living quarters expenditures, however, are well explained by the cohort model. Like the total 'Shelter' model, the cohort model notes a significant and generally monotonic decline right from the 2nd to 9th cohort groups. These findings combined with the overall shelter negative cohort effects and the positive (though non-significant) cohort coefficients for 'Owned Living Quarters' suggest that successive cohort groups of the elderly have been gaining in their ownership of housing stock over the years, another indication along with food expenditures of cohort improvements.

'In-Home Energy' seems to be better explained by the period model but no significant factors emerge. The tendency is to see an increase in all periods but none reach significance. The rapid rises in energy costs are probably responsible for the effect. Matching increases in incomes likely prevent any significant increases in percentage expenditures from showing up.

CLOTHING

'Total Clothing' and 'Women's Clothing' are best explained by period models. Both contain significant negative period coefficients for 1974 and 1982 and positive cohort coefficients for those born around the turn of the century. The general cohort trend is upward but only the first two are significantly different from the base period. Although no coefficients are significant, 'Men's Clothing' was best explained by the age model. So while there is a tendency for women to be altering their clothing patterns with each succeeding cohort, men still seem to be locked into a pattern of a decline with age in the proportion of budgets spent on clothing.

MEDICAL AND HEALTH CARE

'Medical and Health Care' expenditures include contributions to government-sponsored and private health insurance programs as well as direct fees to medical professionals, hospitals and the purchases of medicines and drugs, and supplies and services. The most successful model by far is the period model. In holding only the 1969 period as the base period, it allows for the capturing of the effects of the growth of coverage of government health insurance programs in the early 1970's. This can be seen in comparing the three models. The age and cohort models equate effects of the 1969 and 1974 periods and note positive but non-significant coefficients in subsequent time periods. However, the period model uses only 1969 as the base year period. A dramatic decline in percent expenditures in all periods is noted. The introduction of government subsidized health care has had a dramatic effect for all age groups, significantly decreasing budget allocations.

It is worth at least observing that the difference between the 1969 and the 1978 and 1980 periods is less significant than the difference between 1969 and 1974. The higher variance associated with the latter two survey years seems to be the limiting factor, since the absolute values of the coefficients increase over time. The introduction of user fees and extra billing by some doctors may be the cause of this greater variance in the more recent years. Finally, although there is a negative trend in budget allocations with decreasing age, no age effects were significant.

TRANSPORTATION

The cohort models outperform the other two in the transportation categories. In both the overall 'Transportation' expenditures category and especially in the 'Automobile and Truck Purchase' component, all the significant variables are cohort ones. For the purchase variable, all cohorts born in this century spent a higher percentage on car and truck expenses than did the earliest cohort group. The car is a twentieth century phenomenon. The children of this century developed it

and are using it. The cohort pattern is monotonic and strong with only a slight drop in the latest born cohort group, perhaps suggesting some levelling off.

TAXES AND SECURITIES

Analyses of tax expenditures suggest that the period model explains the data best. There is a substantial jump in 1982. Also three age variables are significant. Generally, those under 68 years old spent more than the oldest two groups in the period model. It would appear that taxes do not drop immediately upon reaching age 65, but rather that there is a short lag. The cohort model excels in explaining total 'Security' expenditure percentages but no variables are significant within this model.

GIFTS

'Gifts' expenditures as a percentage are best explained by a period model in which some coefficients in all categories are significant. Successively larger percentages of total expenditures have been given away with each period after 1969. The youngest age group gives significantly more than the oldest group, and there is a general decline which can be seen in the coefficient values with increasing age. Finally there is a very strong tendency for later born cohort groups to give less and less than earlier born ones. Here the value of cohort analysis can be most readily seen in separating out the opposing forces of period from cohort and age factors. As people age and as later born cohorts mature, a smaller percentage of budgets is given away. Upward increases are related to the period of time through which we have come. If there is a change in the period-related factor which is responsible for this period effect (perhaps it is rising incomes) then declines in contributions can be expected. Declines in percentages given away may reflect shifts over time in who is perceived to be responsible for charitable activities and the support of family members.

DOLLAR EXPENDITURES

Period effects models are much more likely to dominate in explaining variances in dollar expenditures. The mid to late 1970's was a period of rapidly rising prices. Incomes also rose rapidly throughout much of the 1970's. So, large differences in expenditures are seen from one survey year to the next because both prices and incomes were rising rapidly. The effect is especially strong in the period models where the comparison year is the one single pre-1970's year, as opposed to other models where 1974 and 1978 are compared to 1969 and 1972 combined.

As a result a quick summary can be given by saying all expenditures categories had at least one significant model. This was the period model in all cases but 'Clothing' categories, 'Car and Truck Purchases', 'Recreation', 'Taxes', and 'Security' expenditures which were best explained by cohort models. No age models emerged as superior.

Period effects were significant in all best models except for 'Total Clothing' and 'Men's Clothing', 'Transportation', 'Car and Truck Purchases' and 'Recreation' expenditures. Cohort effects also were very important as explanatory variables, frequently entering as long strings suggesting a substantial birthdate-related change in consumption patterns. This can be seen for 'Clothing' and especially 'Men's Clothing', 'Car and Truck Purchases', 'Recreation' and 'Personal Taxes'. Age effects were only significant in 'Recreation' expenditure. All the significant factors are positive indicating increases over time, higher expenditures by each successive cohort, and, where age does appear, higher expenditures by younger groups.

Examination of the plots of the data (not reported here due to space constraints, see Heslop 1985) reveal important information.

The very strong period effect is obvious in both the age and the cohort plots. It is strong and consistently felt in every period as is indicated in Table 1. The only other statistically significant factor is that for cohort 8. Only this one later born cohort is identified as spending significantly more than the earlier cohorts. One might wonder if this is a fluke. However, examination of the groups suggests the identifying of the once cohort as anomalous and the only one to shift upwards in expenditures for food may be an overly conservative conclusion. A very consistent and almost monotonic upward cohort shift is noticeable from the almost parallel set of lines. Each succeeding cohort is spending more in dollar terms than earlier ones.

The same evidence suggests that age trends are there although not statistically significant. The year-to-year patterns across all groups are generally similar. Therefore, the same factors (price rises, income increases) are likely affecting all groups about the same.

Age is not the major determinant of food expenditures over time and across succeeding cohort groups. In other words, age is not a good predictor of need.

SUMMARY AND CONCLUSIONS

In final assessment of the relative effects of age - cohort - period on expenditures four observations are made:

1. Percentage expenditures are useful, perhaps even more useful to look at than dollar expenditures, unless inflation is relatively low. Non-inflation period effects and cohort and age effects were overwhelmed in the 1970's by the dominance of double-digit inflation and the resulting large period effects in dollar expenditure cohort analysis. Percentage expenditures analysis can provide a relative and perhaps more relevant analysis in this case. Attempts to control for and factor out inflation effects would really necessitate the existence of a set of accurate, credible, age-related price inflation measures, which are not currently available.

Percentage figures give a picture of the division of the resources available. They remove again the very powerful effect of a great disparity of incomes and total expenditures among the youngest and oldest groups at any one time and among different cohorts at any one time. At the same time they capture the effect of this budget size in how the different groups divide up their different sized pies.

2. Period effects are important and require careful treatment. If key changes in the marketplace occur, the set-up of the cohort analysis models should be sensitive to these changes. The selection of the base periods should avoid combining two very unlike periods, which may result in the masking of the significant break point.

3. Age is not as powerful a factor as might originally be expected. It appears useful in any consistent way only for taxes as a percentage of expenditures. Age alone explains very little of how, on the aggregate, people allocate their monies. These findings should provide a clear signal of the need to reassess commonly held assumptions that the old need less. Moreover, where age factors are important within models, e.g., regarding food as a percentage of expenditures, there are clear indications of changes in well-being upon retirement.

4. Cohort models play a significant part in explaining overall variance in some key macro-expenditure areas of food and shelter in percentage terms. In dollar terms they emerge for clothing, car and truck purchases and recreation which may suggest that yesterday's image of the elderly may be rapidly

becoming outdated with the emergence of a new elderly who are more interested in leading full, active lives and have the monetary resources to do so. This has implications for future income needs of the elderly. It is no longer acceptable to say the elderly spend less because they do less and wish to do less. The income needs of the new elderly are expanding.

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CONSUMER PERCEPTIONS OF CONVENIENCE FOOD USERS

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Abstract

There is widespread and frequent use of convenience foods by many American housewives. In spite of their ubiquity, very little is currently known about perceptions of users of convenience foods. The author presents current perceptions of women who are nonusers, light users and heavy users of convenience foods.

Introduction and Related Research

Although the wide availability and use of convenience foods is not a recent phenomenon, research specifically focusing on convenience foods and their users is limited. Considering the billions of dollars consumers spend for these products and the huge sums manufacturers allocate to new product development and advertising, this lack of research is quite surprising. This exploratory study is designed to help fill this void by providing some preliminary evidence of consumer perceptions of users of different levels of convenience foods.

Two sets of studies are related to this research. The first was initiated by the now classic study by Mason Haire (1950). His "shopping list" study measured consumers' subjective reactions and underlying motives involved in the decision to purchase or not purchase instant coffee. He found the instant coffee user was considered lazy, a poor planner, less thrifty, a spend-thrift and bad wife much more frequently than the purchaser of regular coffee. In 1968, Webster and Von Pechman (1970) replicated Haire's study and concluded that, "There are no significant differences between characteristics ascribed to the Maxwell House shopper and those for the Nescafe shopper in 1968" (p.63). The authors hypothesize the difference between the results of the two studies is a result of the acceptance of convenience foods by the American housewife of 1968. They further suggest, "while convenience foods were viewed with caution and mild disfavor at the time Haire conducted his study, they now may be taken as a sign that the shopper is "with it".

While one may be willing to accept the conclusion that instant coffee users are no longer viewed as having negative characteristics, is one equally justified to assume that what is true for instant coffee is also true for the use of convenience foods in general? The inferential leap from instant coffee to a blanket assumption that the use of convenience foods is currently acceptable and "with it" may be more than some are willing to accept.

Another set of related studies has developed out of an interest in the increase in married women working outside the household. Consumer researchers have hypothesized that one result of this trend would be an increase in the use of convenience items, time-saving durables, and lead to changes in shopping and meal preparation behavior (Nickols and Fox 1983; Reilly 1982; Strober and Weinberg 1980; Douglas 1976; Roberts and Worzel 1979; Anderson 1971). The results of these studies have not, however, confirmed higher convenience consumption for working wives. Even when time pressures were specifically taken into consideration, no significant difference in convenience food consumption was found by Reilly (1982).

Methodology

Data was collected through the use of a projective technique similar to that used by Haire (1950). Since it is quite possible that consumer perceptions of convenience food users will differ depending on the degree of

convenience food consumption, three shopping lists were developed to test consumer reactions to different degrees of convenience food consumption. A "low" convenience oriented list included one convenience food item, while the "high" convenience food list included four items which could be easily recognized as being convenience foods. The nonconvenience food list consisted of eight items that could be considered "normal" or common purchases for most shoppers.

Results and Discussion

The data was collected over a two day period using a mall intercept procedure. Questionnaires were completed by 80 respondents (26 completed Lists I and II and 28 List III). To analyze the data, the coding procedure strived for a literal interpretation of the descriptions, that is, attempts were made not to "read into" the data. A total of 26 characteristics were reported by participants. The twelve most frequently mentioned characteristics (mentioned by at least 10 percent) were analyzed for differences among the lists.

The nonconvenience food shopper (NC) was much more frequently referred to as a housewife while both the low convenience food shopper (LC) and the high convenience food shopper (HC) were more likely to be viewed as a working wife with children or a single working woman who needs to prepare meals quickly. The perceptions of the HC shopper may be expected, but what is interesting is that the LC shopper was almost as frequently described in an identical manner. Evidently, the appearance of a single convenience food item conveys the impression of a working woman who is on a limited time budget. The association between a perceived shortage of time and use of convenience foods seems to be very apparent. The reverse also seems to be true, that is, those seen as having more time (housewives) are not so likely to be viewed as users of convenience foods. The NC and LC shoppers are viewed as more concerned with nutrition while this is much less frequently mentioned about the HC shopper. It would seem that there is some association between high use of convenience foods and a lack of concern for nutrition.

One could conclude that in today's society convenience foods are considered acceptable, even relatively frequent use seems to have reached a level of approval. It must be emphasized though, that the convenience food user seems to have acquired acceptability through her position not as a housewife or homemaker but because she is a working wife with children or single working woman who needs to prepare meals quickly. It should be recalled though, that the research which has specifically addressed this assumption has not confirmed higher use of convenience foods by working wives. Thus, we see an apparent contradiction between the perception of the reasons for convenience food usage and the actual situation surrounding usage.

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THE INFLUENCE OF SHAPE ON PRODUCT PREFERENCES

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Abstract

This paper explores the mechanism by which an easy-to-spot attribute such as shape can be used to infer more important but less easy-to-spot attributes, such as comfort or freshness, and lead to a product preference. Evidence over the past 30 years (Cox 1962; Monroe and Krishnan 1984, etc.) shows that consumers employ readily identifiable cues such as price, brand, country of origin, sound, color, packaging, touch, smell, to infer quality. Although design is usually fundamental to the aesthetic, functional and structural characteristics of products, there is limited research on how shape triggers preference decisions.

The specific issue examined was consumer reaction to a food product -- frozen corn on the cob of two shapes: full ears with squared-off ends as are now sold in supermarkets, and full ears with untrimmed ends as corn more or less comes naturally from the husks. Two hypotheses were posited: (1) The more natural shape would be preferred; (2) Preference levels would vary with involvement and experience with the product category. In effect, the hypotheses represented presumptions by an innovating food processor about the opportunity for capturing increased concerns toward nutrition and physical fitness. One third of U.S. households use the frozen product so there is substantial potential for market expansion.

The experimental design involved paired comparison tests at laboratory kitchens in enclosed malls and sequential monadic tests in subsequent home placements. Telephone call back interviews were employed. Test panelists included 288 female homemakers, aged 25-59 from two east coast cities: 184 currently purchased the frozen variety and 102 women bought only the fresh.

The findings showed a marked preference for the untrimmed shape as had been hypothesized. Preference ratios (PRs) comparing preference scores for the rounded untrimmed shape to those for the squared off shape were:

-Laboratory test -- 1.1:1 frozen users; 2.0:1 fresh only

-Home placement -- 1.8:1 frozen users; 2.2:1 fresh only

The results were statistically significant at the 1% level. Nearly four out of five consumers said the reason for their choice in the home test was better taste, about half said the untrimmed was a more natural product, and half reported better texture. Visual appeal or a more pleasing shape, per se, were very minor motivations. Ratings on ten attributes showed the basis of consumer preference in a more systematic way. Overall preference ratios were: more like fresh -- 3.2; more natural -- 3.1; taste/flavor -- 2.3; quality -- 2.3; size -- 1.7; texture -- 1.5; shape -- 1.5; appearance -- 1.1. Panelists did not misperceive criteria like ease of preparation (PR -- 1.0), and ease of holding (PR -- 0.8) for which shape had objectively little impact. In each case the no preference group was below 10%. In general, fresh only users were more inclined to the untrimmed shape than frozen users with PRs of 3.9 compared to 3.0 on the criteria of being "more like fresh" and "more natural."

Correlation coefficients between attribute preference ratings showed the most consistent and strongest interactions (r 's of 0.5 to 0.8) are those between taste, quality, in home preference, texture, more natural, and more like fresh. These were variables identified in prior research to be discriminating product features.

The most likely explanation for the results is perceptual categorization (see Bettman 1979; Wilkie 1986) in which shape served as a cue to identify and place the test items in familiar categories. When panelists compared the feature cue of product shape against categories in their long

term memories, they perceived that corn should have untrimmed ends. The test item that did not have this feature was just not "real" corn and hence was categorized as more processed. From their cognitive structure of natural and processed products, panelists then brought forth expectations that the more natural looking product was fresher, hence tastes better and has a better texture, and perhaps is more associated with fun experiences such as summer family barbecues when fresh corn was served or with certain hedonic or "treat" aspects of nibbling corn off a crunchy cob. The data seem to indicate a chain of inter-related inferences rather than a single direct linkage. This explanation seems especially appropriate for the observed differences between frozen users and panelists having little or no involvement with the frozen variety. A variety of studies (e.g., reported on by Matlin 1983) document that consumers weigh impressions from many sense modalities in making food preferences and that human perceptions of taste are not very discriminating between stimuli.

As a theoretical contribution, the findings indicate that attribute(s) communicated, and presumably noticed, may not be considered by consumers to be discriminating in themselves, but rather the attribute(s) this triggers may be considered to be discriminating. The data show that it is not necessary for there to be a high statistical correlation between linked attributes as Huber and McCann (1982) had proposed as a condition for attribute inference. The correlations between shape and taste, quality and preference are all below 0.4. The strength of the link simply appears to correspond to how directly allied the triggered attribute is to the meaning of the accessed attribute, as suggested by Hansen and Zinkham (1984).

The study's implications are for product design and marketing communication. Indications are that new packaged products incorporating more natural shapes or motifs are likely to achieve some success. However, media scripts focusing on shape may not score highly since this cue is not perceived as having much value in itself, but rather in the attributes it triggers.

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INTERACTIVE EFFECTS OF SOURCE
CREDIBILITY, ATTITUDINAL DISCREPANCY
AND NUMBER OF ARGUMENTS ON
ATTITUDE CHANGE

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This paper explores the interactive effects of three cognitive variables (source perceived competence, recipients' initial attitudes and message number of arguments) on attitudes change. A 2 x 2 x 3 research design (2 levels of competence, 2 levels of arguments' number, 3 levels of initial attitudes) was used (N = 381). Results show no main effects of neither credibility nor the number of arguments. However there is a positive and significant main effect of initial attitudes on attitude change. There are significant interactive effects of initial attitudes and credibility (lower credibility induces more attitude change from the opposed group); there are also significant interactive effects of initial attitudes and number of arguments (number of arguments is effective when initial attitudes are neutral). Expected and unexpected results contribute to a global model of persuasion.

PHENOMENOLOGY: NEW METHODS FOR ASKING
QUESTIONS AND INTERPRETING RESULTS

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Abstract

Phenomenology has been proposed as an alternative to logical positivist methodologies which dominate consumer research (Fennell 1984). Whereas the logical positivist researcher deduces and formulates his or her variables, hypotheses and operational definitions based on existing theory, the phenomenologist puts aside or "brackets" all theoretical presuppositions and instead works from scratch, seeking to describe what a product or service means in depth--and in great detail--to the consumer.

Two problems with the phenomenological approach, however, are that (a.) few guidelines exist on how to draw rich material from respondents other than conventional methods such as depth interviews and protocols and (b.) few guidelines exist on how to interpret this material.

Regarding the first point, this paper suggests that researchers can draw rich material from respondents by drilling them in creative writing techniques and asking them to write creative descriptions of the product or service under investigation. Teachers of creative writing face the same problems as qualitative researchers: getting people to use keen observation, use all of their senses, use concrete descriptions, be honest, and use original metaphors. Given sufficient encouragement, as well as a brief discussion of a descriptive excerpt from James Joyce, all types of respondents enjoy this task and tend to write vivid descriptions.

As an example of this technique, a group of undergraduates were asked to write detailed descriptions of "something you bought which made you wildly happy." Answers referred to such things as cars, sailboards, engagement rings, bicycles, fishing poles, art books, sailboats and class rings.

One of the answers, a young woman's description of a tape-playing "music box" was singled out for closer analysis:

"I felt extremely adult and responsible--out in the world earning money at a summer job, then spending it on the luxury item of my choice. I had watched music boxes for a long time in anticipation of this huge investment I was about to make. I went to the store, looked around, listened to a tape and wrote a check! It blew my mind, to be so independent, old, writing checks, making mature decisions about everyday boring purchases! When I left the store I was singing--mentally and literally. I immediately began referring to my radio/tape player as 'my baby' and I felt a definite sense of motherhood. I took (and still take) extreme care of the thing, picking up cleaning tips when I hear them (i.e., don't use Q-tips to clean the heads). I was horrified and unable to scream or speak if my box accidentally fell or got bashed around. I was even so protective as to want to punch my sister for not caring about it as I did. I couldn't understand how she was so blah about my wonderful, acoustically fine music box. When I was shopping and buying I guessed the situation was the beginning of a life-time of expensive decisions--earning money and writing checks. Listening to my box gives me any emotion that can be recorded on a cassette tape: fine harmony and story telling of Harry Chapin, or the ugliness of the world situation. And it takes me everywhere--N.Y. Central Park with Simon and Garfunkel or the Big Ben clock with the Moody Blues. I began to

understand music is universal and this box was part of my possessions and ability to tune in/out. I still feel very maternal towards a hunk of Japanese metal and technology. At the same time it makes me feel very youthful and unburdened to be able to push 'play,' to get noise to match or modify my mood. Like I own a little bit of the power of music."

Regarding the second point, how to interpret phenomenological data, Keen's (1975) 4-way plan for understanding how people attach meaning to experiences is described and applied to the music box case. Briefly, Keen suggests that the direction (positive or negative) and content of peoples' feelings toward objects and experiences are shaped by how they position them against "horizons" of time, geographic space, interpersonal relations and self-definition. Thus, the young woman in our example felt very attached to her music box for four reasons. (1.) Buying it was a future-oriented event for her. It was an "adult" purchase (the first time she ever used a check) and, like all teenagers, she reacts favorably to things based on their implications of imminent adulthood. (2.) It symbolically carries her away to exotic places, rock concerts in London and New York City. Anything reflective of home and being geographically restricted is negatively valued. (3.) It is something she has but her sister does not. In fact, she seems to resent her sister, and relishes the fact that the sister broke an informal pact which says, "One-sister-must-show-a-polite-interest-in-the-other-sister's-possessions." Since her sister broke this pact, she feels entitled to punch her! (4.) It requires deliberate care and maintenance, again implying a responsible, adult self-definition.

The article concludes by stressing how important it is that marketers manage the frames of reference used by consumers to evaluate products and services. Obviously, many marketers already do. Claims that a product will make you "the envy of your friends" implicitly locates the product in consumers' minds in terms of relationships they have with other people. The claim that an automobile is "the car of tomorrow" causes consumers to evaluate it against a temporal horizon. The key point, however, is that a phenomenological approach be used to describe how consumers currently position the product or service in terms of some frame of reference, and use this learning to modify or create new frames of reference in consumers' minds, thereby causing positive evaluations of these products and services. This is a different approach from current positioning theory, which suggests that consumers cognitively position products against other products. In this approach, the horizon or frame of reference is the key positioning element, whether it be temporal, spatial, interpersonal or self-definitional.

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THE SENSITIVITY OF CANADIAN CONSUMER PRODUCT MARKET SEGMENTS
TO CHANGES IN MACROECONOMIC CONDITIONS

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Abstract

The modern finance paradigm, developed from portfolio theory and the Capital Asset Pricing Model has transformed the field of finance. At the core of the paradigm is the partitioning of the total risk of assets into systematic and diversifiable components. The choice of a target market segment and of an associated marketing strategy appears to determine the systematic risk of a marketing project and, ultimately, of a firm. Marketing managers will increasingly need to be able to provide estimates of the systematic risk of their marketing projects. This requires a knowledge of the sensitivity of product market segments to changes in macroeconomic conditions, an issue that has been neglected in the consumer behavior literature.

This paper investigates the response of Canadian consumer product market segments to changes in macroeconomic conditions, using the detailed product line and consumer segment retail trade data published by Statistics Canada. The prime parameter used for this purpose is the RSS, the sensitivity to changes in total retail sales of the sales revenue that consumer product market segments generate at the retail level. Total retail sales are, in effect, used as a surrogate for macroeconomic conditions.

Estimating RSS

First, the variability of the seasonally adjusted real sales by retailers of product i within segment j is obtained using:

$$rs_{ijt} = (S_{ijt} - S_{ijt-1})/S_{ijt-1} \quad (1)$$

where S_{ijt} is the seasonally adjusted constant dollar sales of i in segment j during month t ,
 rs_{ijt} is the relative change in seasonally adjusted constant dollar sales of i in segment j from month $t-1$ to month t .

The standard deviation of rs_{ijt} provides a measure of the real monthly variability of the sales of i in segment j . If, rs_{mt} , the variability in seasonally adjusted real sales of all retailer products and services across all market segments, is obtained in a similar fashion, then the RSS of product market segment ij is defined and estimated as br_{ij} from the regression equation:

$$rs_{ijt} = ar_{ij} + br_{ij}rs_{mt} + e_{ijt} \quad (2)$$

A RSS defined in this way is a dimensionless ratio of the percentage change in real sales of product i in segment j associated with a percentage change in real total retail sales. Values of greater than one indicate the product market segment is more sensitive to macroeconomic conditions than average.

Differences in the RSS of Product Market Segments

Because consumers can more readily defer purchases of consumer durables during periods of economic uncertainty or recession, durables will usually be more sensitive than non durables. The household production model of consumer behavior suggests two more sources of differences. First, if an activity can be obtained as a purchased service or produced in the household using input goods, the purchased service will be more sensitive than the input goods. Secondly, because of switching between activities, products consumed in the production of time saving activities will be more sensitive than those con-

sumed in the production of time absorbing activities.

For high sensitivity products, such as furniture, motor vehicles, and restaurant meals, high socioeconomic status segments are expected to be less sensitive than lower status segments, such as blue collar workers. While it would be difficult to assess this directly, geographic segments may be useful proxies for status differences. For Canada, where manufacturing is concentrated in Central Canada, this suggests we could expect RSS to be high in Ontario and Quebec, and low in the Atlantic Provinces and in the West.

Findings

Analysis of retailer and department store department data for January 1973 to December 1982 first confirmed that durable good markets were generally more sensitive than non durable good markets. There was strong support for the hypothesis that services and finished goods would be more sensitive than the inputs which consumers could use to produce the same outputs in the home, but little support for the more difficult to assess prediction that market inputs to good intensive activities would be more sensitive than inputs to time intensive activities.

Geographic segments within Canada did differ widely in RSS, with the highly sensitive motor vehicle market including some low sensitivity regions. Areas dependent on manufacturing for employment were more sensitive than other areas with a greater dependence on primary industries. The result was indirect support for the expected RSS effects of targeting differing consumer socioeconomic status segments.

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The Nominal Group Technique As An Alternative To The Unstructured
Focus Group As A Qualitative Research Tool In Marketing

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Abstract

In an effort to expand the qualitative tool bag of marketing researchers, the purpose of this paper is to introduce marketing researchers to a widely used qualitative group research technique from the organizational development literature, known as the "Nominal Group Technique," (NGT), (c.f. Delbecq, Van de Ven, and Gustafson 1975). NGT was developed due to certain limitations earlier group research technologies encountered and utilizes advantages of both nominal groups (where members work in isolation, and are groups in name only), and interacting groups (where members regularly interact).

Operationalizing NGT

In an NGT session, individuals are brought into a room, where, for the first ten to twenty minutes there is no interaction. In full view of each other, individuals spend time writing down as many ideas as they can think of in response to a moderator's question. In a marketing application, questions might be on the order of: What problems have you had with your current fabric softener? What issues do you consider when shopping for food for your family? etc. Generally, an NGT session deals with one question only, so the question needs to be constructed carefully so as to stimulate the types of information flows required. It is conceivable that more than one question be administered and the session be divided, taking one question at a time. After this initial period, ideas are shared in a very structured fashion. Each individual provides from his or her private list, one of their ideas. This is done in a round-robin fashion until each individual indicates they have nothing more to share. This step is done without discussion until all ideas are recorded on a flip chart. These ideas are to be listed in the suggestor's own words and can be clarified later in the process.

When all ideas are recorded, a period of discussion much like a traditional focus group ensues for the purpose of clarification of recorded ideas. The discussion opens with a serial discussion of the ideas listed on the flip chart. Each idea is presented and participants can ask for clarification or discussion. This step insures that all ideas are given equal status, and prevents dominant individuals from monopolizing the conversation. Once all ideas are understood, a nominal (anonymous) voting procedure is used in which each respondent rates or ranks the presented ideas in terms of the importance of the idea to them. These ratings or rankings can be combined to determine overall ratings or rankings. Such ratings will help give the researcher an understanding of the structure of the problem or opportunity in terms of the respondents most important dimensions.

Advantages of NGT

Delbecq, Van de Ven, and Gustafson (1975, ch.2), summarize several studies designed to compare NGT with interacting groups. The nominal groups were found in general to be superior to interacting groups in terms of satisfaction of participants with the group process, and quantity and quality of ideas generated. Further, individuals in NGT groups felt a greater sense of accomplishment and a greater interest in future phases of decision making than interacting groups.

NGT is superior to unstructured focus groups in balancing participation and affording an equal status to all participants. Hence, NGT groups impose no restrictions on the number, heterogeneity, or previous acquaintanceship of the participants. In as much as the technique was developed with group decision making within

organizations in mind (Delbecq and Van de Ven 1971), it seems natural that both acquaintanceship and heterogeneity are expected.

Because NGT groups can be said to be generally more structured than are focus groups, moderator training needs will tend to be lower. Generally, the more structured a technique is, the easier it is to train moderators. Some authors (c.f. Goldman 1962) advocate very low structure interviewing processes in focus groups and suggest that effective moderators have a level of training which includes a background in clinical psychology. While NGT moderators should have some training, the skill requirements are not nearly as high.

Applicability of NGT

Calder (1977), delineates three approaches to qualitative methodology including: an exploratory approach, where problems are defined, a clinical approach, where the objective is to get past surface reasons for behavior, and a phenomenological approach, where the client or moderator attempts to see things from the respondents point of view and in the respondents own terms.

Calder's work takes a philosophy of science perspective to focus groups. The value of Calder's work to practitioners using focus groups is the realization that the methodologies appropriate are differentially applicable to the various approaches to focus group research. Calder hypothesized that group size, required expertise of moderators, degree of moderator intervention, and degree of group heterogeneity required for focus group interviews are different under the three different approaches. He also comments about the appropriateness of such aspects of the focus group as verbatim quotes and management observation under the three approaches.

Of Calder's three approaches to focus groups, NGT seems most applicable to the exploratory approach having limited phenomenological applicability and no applicability to clinical approaches. While NGT insures a greater number and quality of ideas generated, it offers less opportunity for the embellishment and detailed explanations looked for in the clinical or phenomenological approaches. Where quantity of ideas is at a premium, such as in product development types of explorations NGT will prove superior to the traditional unstructured focus group.

NGT may also be important when it is desirable to include individuals of different statuses within groups in order to get representation of various role players. This may be especially valuable in purchase situations where the purchase is typically a group decision such as complex family purchases and organizational purchase or other decision processes.

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AN INFORMATION INTEGRATION ANALYSIS OF HOW TRUST AND EXPERTISE
COMBINE TO INFLUENCE SOURCE CREDIBILITY AND PERSUASION

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The investigation of the construct of source credibility and its effect on persuasion has been ongoing for well over thirty years. See Sternthal, Phillips and Dholakia (1978) for a review of the field. One of the major problems in the research on source credibility is that the studies have for the most part hopelessly confounded its components of trust and expertise when the construct was manipulated. Thus, in most studies source credibility was manipulated by creating a highly attractive source (e.g., President Eisenhower) versus a highly negative source (e.g., a Nazi leader). In such "gross" manipulations of credibility, the variables of expertise, likeability, and attractiveness are all manipulated simultaneously. Therefore, it is impossible to parcel out the effects of each.

Recently, Wiener and Mowen (1986) performed a study that manipulated source expertise and trustworthiness independently while holding source attractiveness constant. In the study the measures of the persuasiveness of the messages from an auto mechanic were obtained. (No differences in attractiveness were found across the conditions formed by variations in expertise and trustworthiness.) The results revealed that increasing levels of both expertise and trustworthiness resulted in increased persuasion. Thus, trustworthiness is clearly an important source component and does not belong to the realm of "bubbapsychology," as had been suggested by McGuire (1968).

Given that both expertise and trustworthiness influence the persuasiveness of a source, an important question concerns how these dimensions of credibility are combined to create the construct. Quite different implications would exist for those who seek to persuade others if individuals tend to add trust and expertise to form the perception of credibility than if they multiplied trust and expertise.

In order to begin initially the process of evaluating how consumers may combine information on expertise and trust to form impressions of credibility and persuasiveness, a pilot study was developed to use information integration theory as an analysis technique. As developed by Norman Anderson and his colleagues, information integration theory is a potent tool for identifying the cognitive algebra used by individuals to combine information in order to form impressions. Among other things the approach allows the researcher to identify whether individuals are using multiplicative or additive rules. The approach is implemented by the development of factorial experiments in which information is presented to individuals in a within-subject experimental design. In the present study subjects role played that they encountered a professor in the university cafeteria who in the course of conversation made a strong argument for the state wide adoption of a peak load pricing program for electrical energy usage. In a 3 X 3 within-subjects design, the subjects received nine different descriptions of the professor. Within these descriptions the professor's expertise and trustworthiness were varied. Four different measures of the persuasiveness of the message were obtained. The analysis of variance was interpreted from an information integration perspective. It was hypothesized that subjects would reveal the use of a multiplicative model as demonstrated by a significant interaction between the two independent variables. In addition, it was expected that a plot of the results would reveal the typical "fan" shape found when multiplicative models are employed by respondents.

The results revealed a strong effect for the expertise variable ($F=30.5$, $p<.01$, $df=2,40$). As expertise levels increased, persuasion levels increased. No overall group effect was found for the manipulation of trust. Furthermore, no interaction occurred between trust and expertise, which would have been indicative of a multiplicative model.

The four measures of persuasion were treated as though replicated experiments had been performed allowing the investigators to analyze the data at an individual subjects level. (This analysis assumes that each measure is assessing validly the same construct.) The individual analysis of the data revealed that 13 of the 21 subjects showed a significant ($p<.05$) main effect for trust. Thus, different subjects appeared to be reacting in divergent ways to the manipulation of the external reasons for making the message. In addition, 10 of the 21 subjects revealed a trust by expertise interaction. (Of the ten subjects showing a trust by expertise interaction, eight also revealed a main effect for trust.) These individuals exhibiting the interaction may have been using a multiplicative model.

The study suggests that the question of how individuals integrate information on source expertise and trust should continue to be pursued. The question, however, now seems more complex than as originally proposed. Rather than one of simply identifying whether a multiplicative, additive, or other model is used, it now becomes one of also identifying the types of people who tend to use more complex versus more simplified integration models. Furthermore, one can also expect to find that the type of situation and perhaps the type of endorser may also influence the level of cognitive processing.

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UNDERSTANDING SEMANTIC COMPATIBILITY
IN COMMUNICATION

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In communication, how someone receives a message is dependent upon many things beyond the simple meaning of the verbal stimuli employed. A great deal of meaning is implied by the semantic relationship between the words employed; and without a firm grasp of what these interrelationships are, there is a very real danger of miscommunication. Semantic incompatibility is latent in many cases where on the surface there appears to be no problem at all. For example, when consumers describe a product with a set of attributes, the natural tendency is to assume they are semantically compatible in describing that product. This may not always be the case.

In trying to communicate, whether in marketing communication, instructions on how to do something, health or nutritional information, whatever, concern is always focused upon "what to say." Beyond this obvious point, however, if one is to be an effective communicator, one must also be concerned with the semantic properties of the message beyond their simple verbal meaning. Language can be subtle at times in its effects. Weiner and Mehrabian (1968) have pointed out that the words of communication transmit information that is complementary, supplementary, or redundant to the information transmitted in other components in the communication. Changes in the form of referent, for example GM vs. General Motors Corporation, are the kinds of variations that receivers of a message respond to as much as they respond to other nonverbal components in communication. As Weiner and Mehrabian go on to point out, careful consideration will show that what appears to be the same thing (i.e. the same content) said with different words, can be a basis for inferring quite different feelings or attributes from the message. It is this critical point that we are concerned with in this paper.

No one doubts the importance of the words chosen in verbal communication in determining just how effective that communication is likely to be. And while attention may be paid to insuring that descriptions or attributes within a target message reflect those things most likely to be meaningful to the target receiver, very little, if any, consideration seems to go into possible interactions among those descriptions or attributes. One hopes that there will be a positive, additive relationship among multiple descriptive elements in a communication, but it simply isn't always the case. To the extent that there are incongruities between these verbal elements in a communication, potential dissonance or confusion may result.

As an example, suppose one were to describe a new convenience food product in advertising as "quick, easy, and convenient," under the impression that these three attributes all belong to basically the same semantic factor, and could be counted upon to be additive (if not redundant) in underscoring the convenience aspect or nature of the product. However, a factor analysis of a number of attributes associated with meals and meal preparation, including these three, suggests that they do not belong to the same semantic factor; at least not when applied to food.

"Easy," when used in discussing the preparation of a meal or a food product tends to be thought of as meaning "no attention required." "Quick," on the other hand, is wholly related to considerations of time. "Convenient?" Well, the word convenient in this category factored with "quick," not "easy." This suggests that semantically it is seen as more compatible with "quick" than "easy," even though one may have thought their meanings all but identical. "Quick and convenient" represents a single attribute; "easy and convenient" two attributes, and both must be applicable for believable communication.

Semantic Incompatibility

It is not unusual in semantics to remark that one word may have different meanings or that different words may have the same meaning (although when you stop to think about it, no two words are likely to have exactly the same meaning). Of course, we know these words as synonyms and homonyms; and there has certainly been a great deal written about their strong effects in language. For example, when subjects are asked to recall lists of words that contain synonyms, it is not unusual for them to substitute another synonym for that word in playback. With homonyms, the problem is that when receivers hear or see words with diverse or multiple meanings, they are quite likely to be immediately reminded of the several meanings of the word. Associated problems with synonyms and homonyms in advertising have been discussed by Percy (1982).

While it is obvious that different words may have different meanings, as Palmer (1976) points out, their simple meanings are in an of themselves not of much interest. Only when these different meanings are in some way related does one become concerned with their probable impact upon comprehension in communication.

Often we cannot be sure how compatible a set of descriptors or attributes might be. When we deal with semantic components such as these in language, frequently there is no natural ordering of their meaning. This can be especially true of attributes elicited from consumers as common to a particular product or service. In effect, these attributes are or could be synonyms within the cognitive domain of that particular product: different words that mean the same thing -- viz. the stimulus product. They may not, of course, be synonymous at all; but under certain circumstances they could be. It becomes essential to understand the extent to which any set of commonly elicited attributes or descriptions are in fact seen as compatible or incompatible in the sense of a synonymic usage. There are, of course, a number of analytic techniques available that help delineate this distinction.

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AN INTRODUCTION TO A COGNITIVE-BEHAVIORAL PERSPECTIVE OF CONSUMER BEHAVIOR

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The field of consumer behavior has traditionally borrowed from the behavioral sciences--particularly cognitive psychology--in developing models of consumer decision processes. However, the dominant models of cognitive psychology do not seem to be appropriate for explaining low involvement consumer behaviors. In response, behavioral learning theory has been used to describe low involvement cases where consumers put little thought into decision making and the cost of a "poor" decision is low (Rothschild and Gaidis, 1981; Nord and Peter, 1980).

The purpose of this paper is to introduce an integrated cognitive-behavioral perspective and to show the potential theoretic value of using the integrated framework. The term "cognitive-behavioral perspective" reflects recent attempts, primarily from clinical psychology, to integrate cognitive and behavioral views. Mahoney (1977) has suggested that the following propositions characterize the perspective:

1. The human organism responds primarily to cognitive representations of its environments rather than to those environments, per se.
2. These cognitive representations are functionally related to the processes and parameters of learning.
3. Most human learning is cognitively mediated.
4. Thoughts, feelings and behaviors are causally interactive.

The cognitive behavioral learning (CBL) model claims that the memory construct is comprised of schemata, or packets of knowledge, that integrate information about a particular generic concept, and that schemata are made of scripts that contain dynamic representations of the actions associated with a concept.

The CBL model also recognizes external structural causes of behavior. The external or situational structures primarily provide the consumer with information which can be broken into two types of information cues--discriminative stimulus cues and reinforcing stimulus cues. Discriminative stimulus cues appear in reinforcement situations in which they announce the reinforcement opportunity, but they are not necessary for reinforcement to occur. Examples of these cues would be a model's actions (but not the outcomes) in an advertisement and a company's logo. Reinforcing stimulus cues include vicarious and experiential reinforcing cues. These are viewed in a cognitive sense (as signals) rather than as necessary conditions for learning. Vicarious reinforcing stimulus cues are incurred when an individual observes the outcomes of another person's action. Experiential reinforcing stimulus cues are incurred when an individual directly experiences the outcomes of his/her own actions.

The CBL model proposes that important cognitive processes occur between the input of information and the output of behavior. Two types of processes--cognitive learning and behavioral learning--are proposed by the model. Cognitive learning requires the acquisition of much external information and is associated with the development of an observer script. This type of learning involves the assimilation of small bits of information (i.e., vignettes) about a situation into a script. Behavioral learning requires the acquisition of minimal external information and is associated with the elicitation of an observer or a participant script. The model considers the two learning processes to be complementary and to occur sequentially; a minimal amount of cognitive learning must occur before behavioral learning will take place

(i.e., before behavioral incentives will be effective). Thus, either of the two types of learning may dominate the cognitive processes in a particular consumer situation. Cognitive learning occurs primarily when a consumer is unfamiliar and/or involved with a product or service, while behavioral learning occurs primarily when a consumer is familiar and/or uninvolved with a product or service. Familiarity is reflected in the degree of cognitive development a consumer has concerning a product or service--the more experienced a consumer, the more developed his/her script and schema.

Cognitive behavior modification (CBM) is proposed for inducing consumer behaviors and cognitions. This approach has evolved from the recent work of several cognitive-behavioral researchers--most importantly Meichenbaum (e.g., 1977). In contrast to behavior modification, CBM stresses observational experience and observational- and self-incentives, rather than direct experience (i.e., behavioral practice) or external incentives. The goal of the CBM strategy is to develop or alter a consumer's cognitions (i.e., cognitive representations of actions and their consequences) in an ultimate effort to develop or alter the consumer's behavior.

Most of the information provided during the CBM strategy is experienced vicariously (e.g., watching advertisements) rather than directly (e.g., actual purchase) because of the risk involved in an actual purchase. Since the consumer is unfamiliar and/or highly involved with the product, s/he will be reluctant to purchase it. Thus, vicarious learning of information is accomplished through cognitive or covert modeling in which a model (e.g., actor in an advertisement) displays the appropriate behaviors and cognitions that are emitted during these behaviors.

Cognitive modeling could be used in conjunction with both advertising and personal selling. By using a model to demonstrate (1) the product being used or bought and (2) the self-statements associated with using or buying the product (through the model's dialogue or a voice-over), the ad can help a consumer develop a product script. Covert modeling can be conducted by using advertising which allows the modeled behavior and cognitions to be easily imagined.

This paper has introduced an integrated cognitive-behavioral perspective that can be applied to the study of consumer behavior. Moreover, a cognitive-behavioral learning model was proposed to explain what structural causes of behavior and cognitive processes dominate in different consumer involvement cases.

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A QUICK AND SIMPLE PROCEDURE FOR BENEFIT SEGMENTATION BASED ON CONJOINT EXPERIMENTS

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The traditional approach for benefit-segmentation based on conjoint analysis has been to estimate part-worths for each subject, and then to form clusters based on these subject-level estimates (Green, Wind and Jain 1972, Moore 1980). Since fractionated designs are often used in the collection of preference data (Green and Srinivasan 1978), the estimates of part-worths at the subject-level are usually based on relatively scarce data which can make the estimates quite sensitive to errors in the data.

More recently, Hagerty (1985) proposed a Q-Factor-Analytic procedure which provides direct segment-level estimates of part-worths, starting from the observed preference ratings of stimulus profiles. This procedure groups the subjects based on the stated preferences, eliminating one step in the segmentation process. However, Stewart (1981) demonstrates that in Q-Factor clustering a factor does not represent a cluster and that, in fact, a solution with a single factor may contain more than one cluster, which would make the identification of segments rather complex. The proposed simple procedure also uses stated preferences for clustering subjects into segments. However, unlike Hagerty's (1985) Q-Factor analytic procedure, a complete linkage algorithm is used to cluster subjects according to the similarity of their stated preference rankings, leading to non-overlapping hierarchical segments.

The Proposed Procedure

We assume that when presented with the stimulus profiles, each subject assigns utilities to each, according to the attributes it possesses and the value s/he assigns to each attribute level. This process, however, involves some random error, so that the utilities assigned at each occasion are samplings from distributions of unobservable "true" utilities. In reality, since the subjects provide preference rankings for the stimulus profiles, one can only observe the ranking of a sample of these unobservable "true" utilities. Our objective is to cluster subjects into homogeneous segments according to the similarity in their stated preferences.

Empirical Comparisons

In order to segment the sample according to the preference-based procedure, the correlation between the preference rankings of every pair of subjects was computed, generating a distance matrix. A complete linkage clustering procedure was then applied to the distance matrix, providing the benefit segments. For the procedure based on part-worth estimates, subject-level partworths were first estimated and transformed into standardized ranges. These standardized ranges indicate the relative importance of each attribute. A minimum-variance clustering procedure (Howard and Harris 1966) was then used to form the benefit segments. Multinomial Logit was used for the estimation of subject-level and segment-level partworths.

In attaining the classification objective, we first used a simulation experiment in which preference data were generated from known "true" utility functions plus a random disturbance. In order to emulate different error conditions, the standard deviation of the random disturbances was manipulated in three different simulations. In the first condition (no error), the average rank correlation

between the observed (generated) preference rankings and the "true" interval-scaled utilities was equal to 0.993. The average rank correlation for the other two error conditions ($\sigma=1$, and $\sigma=2$.) were 0.770 and 0.616, respectively. The two segmentation procedures were then applied to these data, to measure the extent to which subjects with identical "true" utility functions were classified into the same segments. In the absence of error ($\sigma=0$), both the procedures correctly reproduced the actual membership (100%) in each of the three segments. When $\sigma=1$, the preference based procedure again correctly classified all the 90 hypothetical subjects to their respective a priori established segments. But the performance of the part-worth procedure decreased as indicated by the measure of fit (Cramer's $V=0.770$) and percentage of classification (67.8%). At a higher error condition ($\sigma=2$), even though the preference based procedure could not repeat its high performance, its overall performance was still better (Cramer's $V=.643$) than that of the part-worth procedure (Cramer's $V=.332$).

Data from an actual conjoint experiment were also used for another empirical comparison. In the experiment, a sample of 100 subjects evaluated 27 profiles forming a fractional factorial design of 5 attributes at three levels each. Four segments were identified by both segmentation procedures. The "average" part-worths obtained by the preference-based procedure for each segment fit best to the preference rankings of each segment member (Kendall's Tau .62 vs .56). This superiority is significant (at the .02 level). Similar conclusions would be drawn by comparing the cumulative log-likelihoods (-5205 for the preference-based clustering, versus -5392 for the part-worths-based clustering).

These results, are not presented to support a claim of general superiority for the proposed method over the traditional method due to the lack of a formal proof. However, the findings tend to reject the hypothesis that the classic benefit segmentation procedure based on subject level part-worths estimates is always better than the simpler procedure based directly on preferences.

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THE INTERNAL ATMOSPHERE OF A RETAIL STORE

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The following paper examines the atmosphere of a retail store that is experienced after one enters the store. Excluded from the discussion is the external atmosphere and environment of a retail store. This is done for reasons of brevity, not that the external atmosphere is any less important to the store's well being.

The paper links research on the psychological dimensions of a store's atmosphere with research on the more specific, concrete stimuli in a store. The concrete stimuli are hypothesized to influence the psychological atmosphere in a store; a store's atmosphere influences the behaviors of its customers (e.g. purchases). Thus, the concrete stimuli in a store are linked to the behaviors of customers through the customers' experiences of the store's atmosphere: concrete stimuli --> store atmosphere --> customer behaviors. Some implications are inferred from this model in regards to questions about which concrete stimuli to use in a store.

A store's atmosphere has both affective and cognitive components. The affective components are pleasure (i.e. contented, happy, satisfied), arousal (i.e. stimulated, excited, jittery), and dominance (i.e. controlling, dominant, influential); the cognitive component is the information rate (i.e. novelty, variety, density, size) (Donovan and Rossiter 1982; Mehrabian and Russell 1974). Research evidence points to the concrete stimuli of color, music, and crowding as influencing the affective dimensions of a store's atmosphere; and to displays and signs as influencing the cognitive dimensions and, to a lesser extent, the affective dimensions of a store's atmosphere. More specifically, previous research is interpreted as indicating:

- The arousal dimension of store atmosphere is positively influenced by:
 - crowding (Harrell, Hutt and Anderson 1980).
 - warm colors (e.g. red, yellow).
 - loud and fast music --how customers are aroused by music influences their buying behaviors differently: faster music decreased sales; louder music had no influence on sales (Milliman 1982).
- The pleasure dimension of store atmosphere is positively influenced by:
 - non-crowding.
 - cool colors (e.g. blue, green) and warm colors like yellow. Warm colors like red positively influence displeasure (Bellizzi, Crowley and Hasty 1983).
- The information rate of store atmosphere is positively influenced by the number of displays and signs in the store.
- The color of a sign conditions how the sign influences a store's affective atmosphere's qualities of pleasure and arousal.

Creating an atmosphere in a store by just emphasizing one element may be difficult: for example, if one wishes to create a pleasant and arousing atmosphere, cool colors are pleasing but not as arousing as warm colors. Atmosphere is created by a combination of music, colors, crowding and other stimuli such as: flooring (tiles, rugs, marble, etc.), ceiling (brightness, color, height), lighting (fluorescent, incandescent, high intensity, indirect), lighting fixtures, fitting rooms, walls, pillars, customer service, etc. Using a combination of stimuli allows for the creation of store atmospheres which are both arousing and pleasant. Such a combination of stimuli could be: cool colors and loud, fast music; or a crowded store with pleasant music and cool colors.

The atmosphere's affective quality of dominance (as contrasted with submissiveness) was not linked with any specific store stimuli in the research reviewed. Casual

observation suggests that many individuals feel submissive to a dominant atmosphere (e.g. high pressure salespeople). In contrast, for many individuals a personal feeling of dominance is only possible in an atmosphere perceived as submissive. A personal feeling of dominance includes a customer's feeling of being in control. Customers appear to have feelings of control when bargaining with salespeople over prices and when choosing a purchase from an assortment of brands.

There is a need for more research investigating relationships between feelings of dominance-submissiveness in the store's atmosphere and such in-store stimuli as the variety of merchandise available and the interactions of customers and salespeople. An initial step in this research may include the re-labelling of the dominant dimension as one of persuasiveness: an atmosphere where customers tend to feel that they've lost control of their abilities to rationally ponder alternatives.

One way to develop further research questions about the store environment, is to examine the settings and methods used in previous research. Research has used both real stores and experimental quasi-stores. The results of this research may only be appropriate to stores selling specific products to specific kinds of customers. Further research is needed to determine which results are unique to specific kinds of stores and customers and which may be generalized to the mass market.

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TELEVISION AND THE ELDERLY: CHRONOLOGICAL AGE AS A PREDICTOR OF VIEWING HABITS AND ATTITUDES TOWARD ADVERTISING

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As research expands on the elderly market it is imperative to realize that chronological age is at best a surrogate variable for underlying causal variables. In this spirit, a study was conducted which shows that the apparent effects of age on hours of television watched and attitudes toward advertising are significantly different when introducing other possible explanatory variables.

Theories of Aging as Related to Television Viewing

Disengagement and activity theories of aging serve as paradigms for approaching the age-television relationship. Disengagement theory asserts that the social system fosters a normative and mutual withdrawal from society and predicts an increase in television viewing with older age. However, the theory has been refuted, with one scholar concluding that disengagement is only likely to occur "among the very old whose declining health reduces their capacity to play any social roles successfully and among those for whom disengagement is a life style antedating old age" (Maddox 1966).

Activity theory is antithetic in its point of departure, suggesting that life satisfaction is maintained or heightened during retirement by involvement in compensatory activities. Studies in activity theory reveal a strong positive correlation between levels of social and recreational activities and satisfaction. Activity theory suggests that the amount of time an individual spends watching television in later life is primarily determined by sociological and psychological characteristics, and chronological age only to the extent that it results in physical limitations to other types of activities. Characteristics that may affect frequency of television viewing are marital status, sex, life satisfaction, education, and income (Burrus-Bammel and Bammel 1985). Thus, disengagement and activity theories suggest competing hypotheses of the relationship between age and time spent watching television. The first hypothesis tested follows the activity theory paradigm, asserting that when accounting for personal characteristics including marital status, sex, life satisfaction, education, and income, chronological age is not a significant predictor of television viewing.

Research findings concerning attitudes and use of television advertising among the elderly have been equivocal, indicating that concepts other than chronological age probably are responsible for forming attitudes toward television advertising. Greater levels of activity should lead to a more positive overall affective state, causing individuals to have positive attitudes toward specific subjects such as television advertising. By influencing activity involvement, several personal characteristics may indirectly affect attitudes toward advertising including marital status, education, and income. These potential causes motivate the second hypothesis investigated, which formally states that when accounting for personal characteristics including life satisfaction, marital status, education, and income, chronological age is not a significant predictor of attitudes toward television advertising.

The Study

Hypotheses were tested on a judgmental sample of 66 young (age less than 30) and 60 elderly (age greater than 60) individuals. Respondents were asked how many hours of television they watched and how many hours they felt their friends watched in a typical day. Using a 7-point delighted-terrible scale, respondents were asked to rate attitudes toward advertising in terms of the value of television advertising in general and as a source of product information. Eleven items from the Life Satisfaction Index A ($\alpha = .74$) were summed to measure this construct.

Analysis proceeded using ANOVA in stages, first measuring the main effects of age by itself and, secondly, measuring its main effects when accounting for other sources of variation. The first stage showed that younger individuals appear to watch significantly fewer hours of television daily than older individuals (1.3 vs. 2.7 hours, $F = 12.34$, $p < .001$). Both groups feel their "friends" watch significantly more television than themselves (2.1 vs. 3.3 hours, $F = 9.71$, $p < .002$). Older individuals also seem more critical in their evaluations of television advertising as a source of product information than younger individuals ($F = 7.28$, $p < .008$). The difference is not as pronounced concerning the value of television advertising in general ($F = 2.22$, $p < .14$). Without further perusal, these findings indicate that older individuals are heavier viewers of television, and more negative in their evaluations of television advertising, than are younger individuals.

Addition of the hypothesized sources of variation, however, causes age to be a nonsignificant factor in discriminating the number of hours of television watched, supporting the first hypothesis. The projective "friends" question produces an age-by-hours-watched relationship that is in the opposite direction of that indicated by the first analysis (i.e., mean hours watched is lowest for the older group). For either criteria, the amount of variation explained by age (ETA squared) drops significantly from 10 percent to 3 percent. Education is most responsible for the apparent age-by-hours-watched relationship ($B = .33$, $F = 7.91$, $p < .01$), indicating that lower levels of education among elderly respondents is primarily responsible for the earlier results. Marital status is the only other variable bearing a relationship with hours watched ($F = 4.10$, $p < .05$). Divorced or widowed individuals have the highest mean hours of television consumption (4.1 hours). All six variables together explain approximately 24 percent of the variation.

The second analysis of the attitudinal measures produced the hypothesized outcome for the value of advertising in general question. Although none of the covariates are individually significant, controlling for their effects indicates that age is a stronger surrogate for predicting assessments of television as a source of product information ($F = 7.28$, $p < .01$), leading to rejection of the second hypothesis. In fact, the results from a multiple classification analysis show the beta value corresponding to the age-attitude linkage increasing from .25 to .49 when considering the covariates.

In conclusion, the results reported here illustrate that the haste of marketers to understand and target the elderly market should not lead to an emphasis on chronological age. Similar to disengagement theory, such an approach ultimately appears counterproductive. More representative and multidimensional paradigms such as activity or social environmental theories of aging hold greater promise for advancing marketing thought in this area.

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PRICE DISPERSION IN CONSUMER MARKETS: THEORY, EMPIRICAL
EVIDENCE AND CONSUMER POLICY IMPLICATIONS¹

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Maynes and Assum (1982) called a consumer market informationally perfect when a single price is charged by all sellers for the same quality and informationally imperfect when different prices are charged for the same quality.

Theory from economics, information theory, and consumer behaviour are used to provide some structure for the preliminary analysis of price dispersion in several consumer markets.

A number of researchers have found more price dispersion in consumer markets than can be accounted for by cost and information factors. Indeed, economic theory on the cost of collecting and analyzing information would predict price dispersion in all markets. It would be unusual if sellers did not take advantage of locational or other monopolies to charge prices which have within them monopoly profits. Information from a number of studies over the past four decades have shown that price is poorly correlated with quality (an average correlation of all studies is around .25).

An analysis of price dispersion for a number of consumer products in Vancouver, British Columbia are compared with price dispersion data reported by Maynes and Assum for several cities in the United States. Price dispersion in Vancouver was higher than in their earlier studies but this may be the result of differences in the definition of data collected. A regression analysis of the price dispersion data in Vancouver revealed relatively low correlations between price dispersion and price level, product class homogeneity, the number of brands in the market, and between durable, non-durable and service type goods.

It is postulated that consumers search more or less depending on their perception of the dispersion of prices in their local markets. However, almost no studies of consumer perception of price dispersion have been found in the literature.

Areas for future research are outlined as are the implications of this research for consumer policy makers.

¹I would like to thank Doyle Weiss for suggestions on performing the regression analysis and to Jaina Endicott for data preparation and analysis.

PREDICTING FREQUENCY OF PROBLEMS EXPERIENCED
BY OWNERS OF USED CARS:
A STATISTICAL ANALYSIS OF SIX YEARS OF CONSUMER
REPORTS' SURVEY DATA FOR 1979 MODEL CARS

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Every year millions of consumers find it necessary to buy used automobiles with little reliable information to help them make this important purchase decision. The one source of information which is often cited as an exception to this generalization is the monthly magazines published by consumer associations in many nations of the world, such as Consumer Reports, the American publication of the non-profit, consumer testing organization, Consumers Union. Each year in the April issue of this magazine detailed summary information is presented relating to serious problems (i.e., problems requiring major repairs) which owners of major makes and models of automobiles report they have experienced in the previous year.

The purpose of this research study is to empirically assess the usefulness of this information to consumers interested in the purchase of used automobiles. More specifically, the study attempts to determine the predictive validity of the information which consists, technically speaking, of aggregate frequency data yielded by Consumers Reports' annual surveys of problems experienced by owners of used cars.

Bivariate and multivariate correlational techniques were used to analyze the data of six annual surveys for 62 makes and models of 1979 cars. The data reports owner problems experienced in 17 individual categories as well as an overall category.

The findings indicate that each year's reported frequencies of problems are highly predictive of next year's, both for the overall and individual categories. Predictability was found to differ significantly by individual problem category and by the recency of the survey data.

Should additional research confirm the study's findings for the 1979 model cars, it would seem that consumer educators would have a strong empirical basis for recommending that prospective purchasers of used cars employ Consumer Reports' used car problem data as a positive predictor of future problems. These consumers should be cautioned, however, that a) all problem areas are not likely to be equally predictable, and b) for a car of a given model year, the more years it is owned and used, the more useful is the survey information derived from it likely to be in predicting next year's problems.

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AN EXPLORATORY ASSESSMENT OF THE EFFECT OF ALTERNATIVE ADVERTISING APPEALS

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Abstract

An experiment is described in which alternative fear-arousing appeals are studied and are compared with the positive (benefit) and neutral (straight-forward information) type of appeals. Some of these effects conflict with some previous findings and suggest caution in using fear appeals in marketing communication.

Background

Persuasive communication in marketing and advertising has used both fear and benefit appeals to elicit compliance. Yet very little research can be found that has tested the efficacy of a fear appeal vs. promise of a benefit.

Raven and Kruglanski (1970) and later Rubin and Lewicki (1973) found some evidence that influence attempts that employed a reward type appeal resulted in more compliance than did those relying on coercion. However, among low anxiety subjects a fear arousing appeal may be more effective than a positive appeal, while opposite may be true among high anxiety subjects [Wheatley and Oshikawa (1970).] Evans et. al. (1970) compared the effect of threatening physical consequences and the promise of social approval and found that actual behavior change was greater for appeals based on the latter.

Research Objectives

This study seeks to remove some ambiguities in the earlier research in the use of fear appeals and provide some directions for advertising researchers working in this area. Specifically, the main research objective of this study is to: (a) assess the effectiveness of alternative advertising appeals (on a reward-coercion continuum) and (b) examine the nature of the relationship between communication effects and the degree of fear appeal.

Research Methodology

Earlier researchers (Ray and Wilkie 1970, Burnett and Oliver 1979) have indicated that the efficacy of the use of fear appeals is perhaps subject, product, or situation specific. Our proposed experimental study is designed specifically to address these concerns. Cigarette smoking was chosen as the substantive context to understand the effects of the use of fear appeals in healthcare advertising, and this study, unlike earlier studies in the field, is relevant to the situation since all subjects are either active or passive smokers.

The survey instrument consisted of the following measures: (a) A 12 item scale measured attitudes toward the most common reasons why smokers may want to stop smoking and the importance of these reasons to them. (b) A 12 item scale measured the subjects' knowledge of the real effects of smoking. (c) An 18 item scale measured the subjects' reasons for smoking cigarettes. (d) A 13 item scale assessed environmental and interpersonal influences that might facilitate or hinder a smoker's attempt to alter the smoking habit.

The advertisements used in the study depict six different levels of appeals based on the reward-coercion continuum: level I (positive appeal), level II (neutral messages), levels III through V (varying degrees of fear appeal), and level VI (strong positive and mild negative). These illustrations were field tested, and three separate groups of student volunteers ranked them on the basis of the amount of fear appeal. To construct the advertisements, key messages were developed and appropriate corresponding visuals were made. Each respondent viewed the slide pre-

sentation after completing the attitude questionnaire. Five neutral slides were shown in succession prior to showing each advertising concept. All six concepts are randomized prior to presentation. Immediately after viewing the advertisements on the slides, each subject was asked to assess comprehension of the message and communication effects.

Results and Discussion

Two hundred and ninety seven usable questionnaires were included in the final analysis. A repeated measures analysis of variance procedure assessed the communication effects of the different advertising appeals used in the experimental study.

The degree of believability was very high for all six advertising concepts even though different advertising appeals produced statistically significant believability scores. These findings also indicate that the relative to the neutral appeal, all other types of advertising appeals were perceived to be more believable. Further, the medium level of fear appeal produced the highest believability score.

The analysis of variance results for message relevance across advertising appeal type indicated statistically significant differences. The analysis of variance for message pleasantness across advertising strongly indicated that respondent's evaluations on the message pleasantness varied significantly from one advertisement to another.

The findings from ANOVA for anxiety production of message across advertising appeal revealed statistically significant differences, but they were all relatively low scores. These results, therefore, indicate that the anxiety arousing persuasive messages were not so strong as to evoke such specific responses as withdrawal of attention, dislike of the sources etc.

The analysis of variance results for behavioral intention across advertising appeal indicated that the appeals differ significantly in their average intention behavioral ratings. Such variations in ratings cannot be attributed to chance alone. An examination of average ratings for each appeal type reveals that the strongest level of fear appeal elicits the highest intention-behavior rating and the neutral theme gets the lowest score on this measure.

These results appear not to support the corollary that the overall relationship between level of fear appeal and probability of pay off behavior will describe a nonmonotonic (inverted U-shaped function) so that use of intermediate levels of threat produces more of the target behavior than do lower or higher levels of threat. The findings indicate that: (i) for all levels of fear appeals, a significantly higher number of respondents indicate a higher degree of intention to undertake suggested behavior than when the advertisement contains a neutral theme. (ii) A significantly higher number of respondents indicate a high degree of intention to undertake the suggested behavior when the advertisement depicts a positive appeal than when it contains a neutral theme, and (iii) A significantly higher number of respondents indicate a higher degree of intention to undertake suggested behavior when the advertisement depicts a mixed (positive and mild fear) appeal than when it contains a neutral theme. However, the combination appeal is not found to be more effective than either a positive or negative appeal.

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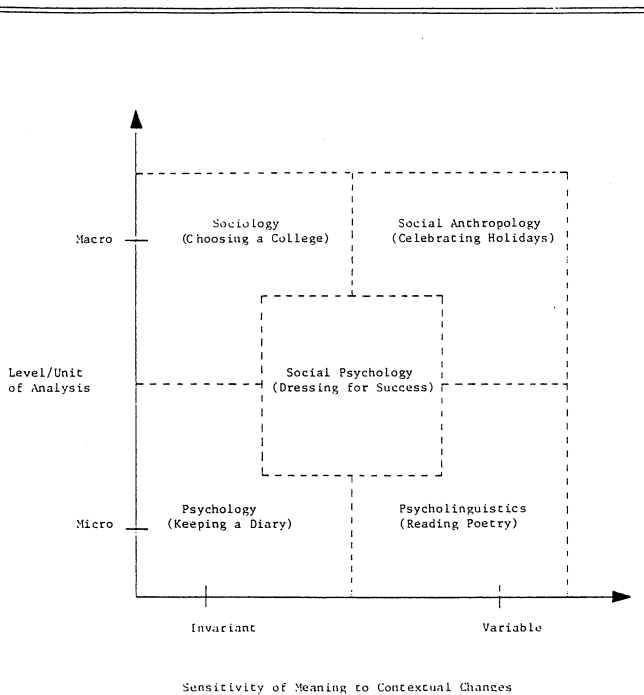
Introduction

The emergence of the experiential perspective in consumer research (Holbrook and Hirschman 1982) suggests the importance of developing a working epistemology of symbolism. At its core, the experiential perspective depends on the subjective meaning of consumption, which is to say on its symbolic content. This paper offers an initial, yet multidisciplinary consideration of such fundamental questions as "what is a symbol?" and "how does a symbol come to mean what it does?" It initiates the analysis of consumption symbolism as a process, an endeavor that has occupied other disciplines for some time.

Organization

Following the convention of Morris (1938), the study of symbolism/meaning has been approached in terms of semantics (that subdivision of semiotics concerning the relationship of signs/symbols to objects), syntactics (signs to signs), and pragmatics (signs to their interpreters). Cognate disciplines' emphasis in such research can be mapped as illustrated in the accompanying Figure.

FIGURE
 TRADITIONS IN SYMBOLISM/MEANING RESEARCH
 (WITH ASSOCIATED CONSUMER BEHAVIORS)



The Psychological/Psycholinguistic Tradition

Psychological research on symbolism or meaning is characterized by individual-level analysis and comparative insensitivity to context. Typical of this tradition is the work of Charles Osgood, whose mediational theory of meaning has been popularized by the semantic differential (Osgood, Suci and Tannenbaum 1957). This paradigm construes meaning as the location of a sign (a stimulus that evokes reactions relevant to a target object) in semantic space--its mediational direction and polarization--operationalized by the dimensions of activity, potency and evaluation.

The Anthropological/Sociological Tradition

Anthropological research in symbolism employs a macro level of analysis and meaning is very sensitive to context. To anthropologists, meaning is something collective and shared that "resides" in a culture's symbols (expressive acts or objects). Mary Douglas (1982), with her emphasis on group properties (e.g. "grid" and "group") that influence how people select symbols (and which ones) to comport themselves appropriately, exemplifies this research tradition.

The Social Psychological Tradition

Although a variety of paradigms fit this tradition, the work of Ogden and Richards (1953) is illustrative. They propose the assignment of meaning in the form of a triangular analog, anchored by symbol (signs used to think and/or communicate), reference (thought), and referent (what the symbol stands for). Causal relations are postulated between symbol and reference and between reference and referent. Symbol and referent are related by inference. Thus, what a symbol stands for (that to which its user and/or interpreter believes it refers) must be inferred from thought.

Conclusion

An epistemology of consumption symbolism must account for its semiotics. While each of the research traditions noted has something to contribute, much remains to be formulated. Consumer researchers need especially to focus on the process by which symbols acquire meaning.

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¹ A more extensive version of this paper is available from the authors.

CONSUMER USE OF VIDEOTEX SERVICES IN FRANCE

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Abstract

The French telecommunications authority (DGT) is embarked on the world's most ambitious effort to make videotex a mass medium. The initial success of the French videotex system (Teletel) can be attributed to a number of factors: the free distribution of two million Minitel terminals, a pricing system which allows easy entry and exit for consumers, performance of the billing and collection functions by the DGT rather than by service providers themselves, free consumer access to a nationwide electronic telephone directory, a data transmission network whose costs to consumers are independent of the distance between users and service providers, and a flexible regulatory regime.

As of the summer of 1986, over a thousand videotex services were available to the general public in France. These services are offered by both large institutions (e.g., newspapers, banks, railroads, retailers) and a dynamic sector of small businesses known as the "new telematics editors."

By far the most frequently consulted service is the nationwide electronic telephone directory. Over three-quarters of all Minitel holders report using the directory. In terms of the percentage of people who report using other types of services, the next most popular ones are banking (14%), transportation and tourism (13%), shopping (10%), newspapers (8%), and games (7%). However, these figures mask the fact that, in terms of the amount of time spent consulting videotex offerings, services which allow individuals to anonymously communicate with each other ("messengeries") are second in importance to the electronic directory. This constitutes one of the surprises of the French videotex experience. The original advocates of the Teletel system envisioned it as primarily a medium of information retrieval and commercial transaction, not as a new medium of interpersonal communication.

The "average" Minitel holder claims to use his/her terminal one or two times a week. However, usage is highly concentrated. Six percent of all households account for a third of all videotex traffic generated by the general public.

Somewhat contrary to expectations, use by individual consumers tends to be confined to a single type of service. Slightly more than half of all Minitel users limit themselves to the electronic directory. Another quarter of Teletel users consult practical or utilitarian services (e.g., banking, shopping, obtaining travel and transportation information), but only a small percentage of these consumers regularly consult more than one type of these practical services. Users of the much-publicized "convivial" services (e.g., electronic dialogs, bulletin boards, forums) are relatively small in number although disproportionately heavy in terms of their dollar expenditures, that is, time on the system. Finally, less than ten percent of all consumers report either regular or even intermittent use of both practical and convivial services.

An additional unanticipated aspect of consumer videotex use in France is the relative equality of the sexes in terms of their tendency to use their Minitels. In contrast to the experience of virtually every other videotex system in the world, men are only slightly more likely than woman to report that they use their terminal. (Of course, differences in the intensity of use may exist.) This finding may provide some indication that videotex may indeed become a mass medium in France.

In sum, videotex technology appears to be taking hold in France. While it is doubtful that the Minitel will ever rival the telephone or television set in terms of depth of diffusion, videotex is likely to be an important component of the French telecommunications and marketing scenes for the foreseeable future. Easy entry and exit from the market for both service providers and users, plus an array of direct and indirect government subsidies, provide both businesses and consumers with ample opportunity to see whether videotex can shake the label of being a technology in search of a market.

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AN EMPIRICAL TEST OF THE COGNITIVE RESPONSE MODEL:
THE IMPORTANCE OF THE RESPONSE SOURCE DIMENSION

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Abstract

Researchers in the fields of information processing, especially those studying the effects of advertising campaigns, have made regular use of cognitive responses to assess a message's impact on its recipients. Subject protocols are typically coded by whether they agree with (support arguments) or disagree with (counterarguments) the message advocacy.

This so-called agreement dimension is the sole basis on which the majority of researchers code the elicited responses. The three noteworthy exceptions are empirical studies by Wright (1973), Roberts and Maccoby (1973) and Calder, Insko and Yandell (1974). Each of these studies employs one or more additional dimensions usually relating to the strength or source of the response. Using the early work of Greenwald (1968) as a model, they code responses as

- a) recipient - generated
- b) recipient - modified
- c) message - supplied

in addition to whether they supported or refuted the message advocacy (e.g. the agreement dimension).

The study described here compares the predictive power of the widely-used agreement-only coding scheme with an agreement-source model. In addition, the response elicitation procedure gathers verbal rather than the written protocols which are typically the basis of response coding.

Hypothesis

The basic proposition investigated by the study is that coding cognitive responses by source as well as by agreement is superior to using the agreement dimension alone. The two models appear as follows:

- 1) Source-agreement model

$$A = W_1 \sum MS_{pos} - W_2 \sum MS_{neg} + W_3 \sum RM_{pos} - W_4 \sum RM_{neg} + W_5 \sum RG_{pos} - W_6 \sum RG_{neg} \quad (1)$$

- 2) Agreement model

$$A = W_1 \sum (MS_{pos} + RM_{pos} + RG_{pos}) - W_2 \sum (MS_{neg} + RM_{neg} + RG_{neg}) \quad (2)$$

where

A: Criterion variable of acceptance
MS: Message-supplied response
RM: Recipient-modified response
RG: Recipient-generated response
pos: positive
neg: negative
W: Discriminant weights

Experimental Design

Thirty-seven homeowners living in the Washington, D.C. suburbs comprised the sample. All were chosen from the same subdivision to control for differences in house size and demographics.

Subjects individually read a message and viewed 3 television commercials on the need for home energy conservation. All subjects were exposed to the same stimulus material. Oral cognitive responses were surreptitiously recorded after the reading and viewing of the materials. The hidden recording was done to reduce subject reluctance to speak freely and the procedure was disclosed in a debriefing at each session's end.

After the second response elicitation subjects were given the opportunity to accept or reject the offer of a free home energy audit. This choice, the dependent variable in the design, simply classified subjects into auditors and nonauditors. The predictive accuracy of each model could then be assessed by determining how many subjects each model correctly classified as auditors and nonauditors.

Data Analysis

Response coding was performed by 2 independent judges who were trained expressly for this study. After achieving satisfactory levels of inter-coder and test-retest reliability on a separate data set, they coded the data from the current study into the six response categories appearing in Equations (1) and (2). A total of 417 responses were coded across the 24 auditors and 13 nonauditors.

Two-group discriminate analysis was used to assess the predictive accuracy of the two models. A "jack-knifing" procedure was used to avoid upward bias in model building and subject classification. (The small sample size precluded the use of a hold-out sample for model testing). Due to the unequal cell sizes (24 and 13), the proportional chance criterion function was used in comparing the predictive accuracy of the two models (Morrison, 1971).

With 92% (12 of the 13 nonauditors) successful classifications, only the source-agreement model showed predictive accuracy which is significantly superior to proportional chance (54%, $t=3.45$, $p<.01$). The 69% success rate of the agreement-only model is not significantly better than chance ($t=1.0$, $p<.20$). Finally, a comparison of the two models (92% vs. 69%) indicates that the source-agreement model's higher success rate is significant at the .10 level ($t=1.53$).

Conclusions

The results of this pilot study support the use of both the source and agreement dimensions in the coding of cognitive responses. Clearly additional research is needed using larger samples and a variety of designs, stimuli and response elicitation procedures.

However, given the fact that cognitive responses are so widely used as a dependent variable and that only additional coding, rather than additional data-gathering, is required, more attention should be given to the use of the source dimension in coding.

References available upon request.

¹At the time that this research was conducted the author was a member of the Marketing Department, The American University, Washington, D.C.

PRICE NEGOTIATION AMONG RETAIL MERCHANTS:
WHO DICKERS AND WHO DOESN'T?

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Abstract

Bargaining behavior is an interesting and a familiar phenomenon which has existed virtually as long as humans have exchanged goods among themselves (Lidstone 1977). In peasant markets like the open-air markets of Latin America, negotiation is still a primary means of price setting (Beals 1975, Malinowski and de la Fuente 1982). Even in our modern, mechanistic society price setting remains a complex and dynamic social activity (Prus 1985). Literature related to price negotiation is scant and tends to focus on consumers, especially in industrial settings.

This paper addresses two questions about price negotiation: First, how willing are retailers to negotiate prices directly with consumers? And second, what determines which merchants will and which will not negotiate?

Beals (1975) found that, in Mexico, merchants who were more involved in the production of their goods were more likely to bargain than those who strictly bought and sold. He also noted that, in periodic markets, merchants became increasingly willing to negotiate as market day came to a close. Pennington (1968) presumed that negotiation would be more likely for durable goods than for non-durables. Prus (1985) indicates that salespeople in large organizations will be less likely to dicker than those in small enterprises. Finally, as suggested by literature on deal-proneness (Blattberg 1978, Montgomery 1971, Webster 1971), there may be attitudinal factors which affect willingness to negotiate. Specifically it is asked whether merchants who are willing to dicker are the same people who choose to do so when acting the role of consumer.

Method

Data were gathered by personal administered questionnaire from a quota sample of 32 retail merchants of durable goods in Salt Lake City, Utah. Participants were chosen to provide representation of chain stores, multiple outlet regional stores, and single stores. In each store the questionnaire was administered to the highest ranking available person who was directly involved in selling. Upon completion of the questionnaire the respondent was interviewed briefly to cross-check the accuracy of the responses, especially if certain responses appeared inconsistent with other responses or with observable fact.

Willingness to negotiate, the dependent variable, was measured by five items ($\alpha = .92$) on a six-point likert scale. Three items ($\alpha = .81$) were used to determine if the respondent enjoyed or frequently practiced dickering in his or her own purchasing activities. The merchant's involvement in the production of his or her merchandise was indicated on a percentage of total merchandise basis (in retrospect, not a good measure). The size of the organization was measured by the number of stores. Finally, the salesperson's authority to negotiate was measured with a six-point semantic differential scale.

Multiple regression analysis was used to determine the degree to which merchants' preferences for negotiation as consumers, their involvement in the production of their goods, the sizes of their organizations, and their personal authority to negotiate combine to explain the variance in their willingness to negotiate price with their customers.

Results

The study revealed that a surprising number, 35.5% of the merchants surveyed, indicated their willingness to negotiate with a four or five on the six point scale. The mean score for all merchants was 3.9. Regression analysis produced an explained variance of .62 for the four independent variables, but only two variables, preference for negotiating as consumers and size of organization, were significant at $\alpha = .05$. The single most important variable was the merchant's disposition toward negotiating, entering in stepwise analysis with an R squared of .53. As expected, the measures for organization size and authority to negotiate were negatively correlated ($r = -.684$).

Discussion

The results indicate that merchants in small organizations are more likely to exhibit willingness to negotiate price with their customers than those in larger organizations. Moreover, they are more likely to have the authority to do so. The merchant's involvement in the production of his or her merchandise did not seem to be a good predictor for willingness to negotiate. This may have been due to the quality of the measure or the size of the sample. Only three of the 32 merchants, one specializing in custom jewelry, another in custom furniture, and the third in locally produced mattresses, showed any observable production involvement. All three voiced high levels of willingness to negotiate.

The most interesting result of the study was that negotiation seems to be more of an end than a means for the people surveyed. Those that are willing to negotiate are likely to do so whether they are selling for their livelihoods or purchasing for their own use. Those who are unwilling to negotiate their prices also tend to prefer not to dicker when purchasing for themselves. This might lead to the conclusion that price negotiation, or dickering, is done more for social or psychological reasons than for economic ones.

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SOURCE EFFECTS IN PERSUASION EXPERIMENTS: A META-ANALYSIS

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Abstract

A meta-analysis of research findings is presented on the effects of communicator variables on attitude and behavior change from the 1950's to the present. On the average, 8 percent of the variance was explained by source variables.

Source Variables

A review of the substantial body of the marketing, psychological, and communication research literature on source effects supports the conclusion that source variables, e.g., credibility, expertise, attractiveness, and similarity, influence the attitudes and behavior of target audiences. What are the relative effect sizes of various source variables? What laboratory and field conditions increase the amount of variance explained by source variables? Answers to these questions will help serve as benchmarks in interpreting future research findings on source effects.

Meta-Analysis Overview

Hunter, Schmidt, and Jackson (1982) note knowledge cumulation to be a two-step process. First, a cumulation of results across studies is necessary to establish facts. Second, theories should be formulated to place the facts into a coherent and useful form (p. 10). Meta-analysis accomplishes the first step by averaging results across source effect studies in order to explain the observed variation, if any, in measured responses of subjects. Research on source variables lends itself well to meta-analysis because many empirical studies have been done over the past 30 years. Narrative reviews have been done (Sternthal, Phillips, Dholakia 1978) and a quantitative review is needed.

Glass, McGaw, and Smith (1981) identify two categories of research characteristics to consider as independent variables in meta-analysis. First, substantive characteristics pertain to what was measured, i.e., beliefs, attitudes, intention, or behavior of respondents. For example, are effect sizes significantly different for measured beliefs versus attitudes? Studies can be grouped according to what source effect was manipulated, i.e., expertise, similarity, or attractiveness. Are effect sizes significantly larger for one subject group versus another? Second, method characteristics (lab versus field, students versus non-students as subjects) become independent variables in the meta-analysis. The dependent variable in the meta-analysis is the size of the statistical effect on the subject due to the source of a persuasive communication. Effect size is measured by w^2 , which is defined as the amount of total variance explained by the source manipulation and is computed as in Hays (1973).

Sampling

Thirty-one articles on source effects from psychology and marketing journals contained information on 96 manipulations in which w^2 could be computed. Although 96 effect size data points may seem small, the present research domain is narrow compared to other meta-analyses (e.g., Peterson, Alba, and Beltrimini 1985) and more specific information is gained.

¹The author thanks Prof. Arno J. Rethans for helpful comments and the College of Business Administration, Penn State University, for research support. Address correspondence to Elizabeth J. Wilson, College of Business, Penn State Univ., University Park, PA 16803.

Hypotheses

Four hypotheses were specified based on the research questions posed above. Rationales are stated briefly.

H1: Effect sizes in studies with scaled responses as the dependent variable (measured beliefs or attitudes) will be larger than effect sizes in studies with overt behavior as the dependent variable. Overt behavior usually involves financial or time commitments of the subject who may be unwilling to complete such transactions versus checking a point on a scale.

H2: An attractiveness manipulation will yield larger effect sizes than an expertise manipulation which will yield a larger effect size than the similarity manipulation. Attractiveness is an inherent characteristic of the source and readily perceived by the subject. Expertise and similarity are hypothesized in this order based on Busch and Wilson's (1976) findings.

H3: Effect sizes in lab studies will be larger than those obtained in the field. Lab studies offer more control and obtained effects may be larger.

H4: Effect sizes in studies using students as subjects will be larger than those in studies using non-students. Students are more likely to be used in the lab while consumers are more likely to be contacted in the field.

Results and Conclusions

H1: Marginally supported. Effect size (w^2) means for four levels of response were: beliefs (.12), attitudes (.07), intention (.07), and behavior (.08)-- $F = 2.58$, d.f. = 3/92, $p < .10$. Conclude that source effect sizes are generally homogeneous and comparable on this dimension.

H2: Not supported. No significant difference in the mean effect sizes for the three source types, however the means were in the hypothesized direction. Mean effect sizes were: attractiveness (.11), expertise (.086), and similarity (.07). Conclude that it is acceptable to combine source effect sizes over this dimension to obtain an average effect.

H3: Marginal support. Mean effect size for lab studies was .10 while field studies was .07 ($F = 3.16$, d.f. = 1/94 $p < .10$).

H4: Supported. The mean source effect size in studies with students as subjects was .10 versus .06 for non-student subjects ($F = 5.56$, d.f. = 1/94, $p < .01$).

On the average, the source manipulation explained eight percent of the total variance. This is consistent with Sawyer and Ball's (1981) observations of effect sizes in behavioral research studies. Researchers in the area of persuasion may find this benchmark useful in evaluating future findings.

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