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Online Consumer Behavior: A Review and Agenda for Future Research

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Abstract

The topic of online consumer behavior has been examined under various contexts over the years. Although researchers from a variety of business disciplines have made significant progress over the past few years, the scope of these studies is rather broad, the studies appear relatively fragmented and no unifying theoretical model is found in this research area. In view of this, we provide an exhaustive review of the literature and propose a research framework with three key building blocks (intention, adoption, and continuance) so as to analyze the online consumer behavior in a systematic way. This proposed framework not only provides us with a cohesive view of online consumer behavior, but also serves as a salient guideline for researchers in this area. We conclude our paper with a research agenda for the study of online consumer behavior.

Keywords: framework for online consumer behavior, intention, adoption, continuance, literature analysis, individual/consumer characteristics, environmental influences, product/service characteristics, medium characteristics, online merchants and intermediaries characteristics

1. Introduction

Online consumer behavior has become an emerging research area with an increasing number of publications per year. The research articles appear in a variety of journals and conference proceedings in the fields of information systems, marketing, management, and psychology. A review of these articles indicates that researchers mostly draw theories from classical consumer behavior research, such as behavioral learning (Skinner, 1938), personality research (Folkes 1988), information processing (Bettman 1979), and attitude models (Fishbein 1967).

Moreover, a close examination of the literature in this area reveals that most of the components of consumer behavior theory have been applied to the study of online consumer behavior. However, the application is not as straightforward as simply borrowing the components and applying them. There are still significant differences between offline and online consumer behavior that warrant a distinguishing

conceptualization. For example, Vijayasathy (2001) integrated the web specific factors (online shopping aid) into the theory of reasoned action (TRA) to better explain consumer online shopping behavior. Song and Zahedi (2001) built on the model of the theory of planned behavior (TPB) and examined the effects of website design on the adoption of Internet shopping.

A review of online consumer research reveals that the scope of published studies is rather broad, the studies appear relatively fragmented with contradictory results, and only very few prior studies (e.g., Jarvenpaa and Todd 1996, Koufaris et al 2001) have attempted to systematically review and develop a framework for the study of this important research area. In this vein, the objectives of this study are: (1) to provide a systematic and exhaustive review of online consumer behavior research, (2) to identify important constructs that are specific to the context of online purchasing, (3) to propose an integrated framework that enhances our understanding of the underlying driving factors of online consumer behavior, and (4) to provide directions for future research in this area.

The paper is organized as follows. Section II outlines the research approach and Section III describes the results and the literature analysis. Section IV presents an integrated framework for the study of online consumer behavior. Finally, Section V addresses the discussion, and Section VI concludes the paper by considering the future research agenda in this area.

2. A Structured Research Approach

Prior literature provides us with a rich foundation on which to build a research framework for the study of online consumer behavior. As suggested by Douglas et al. (1994), strong theoretical and conceptual frameworks can be developed through an integration of constructs from different research traditions and disciplines. In the current study, we review the prior literature of online consumer behavior and analyze the theories and the underpinning factors.

A systematic and structured approach in search and review is strongly recommended in writing sound IS literature reviews (Webster and Watson 2002). In this study, we conducted an exhaustive and systematic electronic search using ProQuest, Social Science Citation Index, IEEE Xplore, and other bibliographic sources with keywords such as “online shopping”, “Internet shopping” and “online consumer purchasing behavior”. In addition to the search for referred journal articles, we included three IS-related conference proceedings (AMCIS, HICSS, ICIS) in our literature search and analysis.

A total of 351 articles in the area of online consumer behavior were identified from 1994 to April 2002. For any study to be included in our analysis, it has to focus primarily on consumer purchasing behavior on the Web. Electronic copies of most articles were obtained from digital libraries and online databases. They were stored and analyzed with the use of the EndNote software.

3. Literature Analysis Results

The 351 articles were analyzed and classified in terms of publication year, title, underlying theory/framework, and dependent and independent variables studied. We believe that this clarification provides fruitful insights about online consumer scholars. In particular, this analysis helps researchers discover deficiencies and identify potential unexplored research opportunities in this area.

3.1 Historical Overview

The importance of an emerging research area is reflected in the increasing number of publications per year. The number of articles in the online consumer behavior literature has risen dramatically in the past four years, with over 120 articles being published in 2001 (see Figure 1).

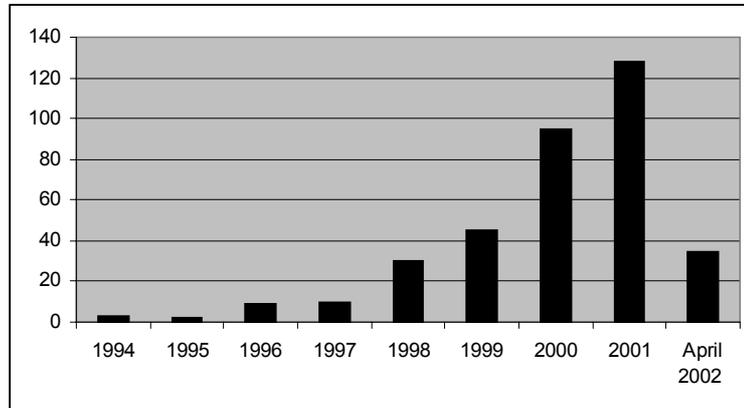


Figure 1: Number of Publications by Year

3.2 Publications

Research on online consumer behavior appears in a variety of journals and conference proceedings in the fields of Information Systems, Marketing, Management and Psychology. In Information Systems it appears that online consumer behavior research is not yet part of the mainstream. As is typical for an emerging research area, most articles appear in new, innovative journals such as the *International Review of Retail, Distribution and Consumer Research*, *International Journal of Electronic Commerce* and *Internet Research: Electronic Networking Applications and Policy*. We expect that as this research area matures, articles will begin to find their way into more established journals such as *MIS Quarterly* and *Information Systems Research*. Moreover, it is interesting to find that many non-IS journals such as the *International Review of Retail and Distribution and Consumer Research*, rank the highest in terms of number of articles published in this area. This illustrates the importance of this research area to MIS and related disciplines. Table 1 shows the ranking of the journals that have published articles in online consumer behavior (we only included journals with at least two articles in this area).

Table 1: Number of Online Consumer Behavior Research Studies in Journals

Journals	Count
The International Review of Retail, Distribution and Consumer Research	24
International Journal of Electronic Commerce	18
Internet Research: Electronic Networking Applications and Policy	11
Communications of the ACM	8
Information & Management	7
Journal of Marketing Communications	7
Electronic Markets	6
Journal of Marketing Practice: Applied Marketing Science	6
Quarterly Journal of Electronic Commerce	6
Electronic Commerce Research	5
Business Strategy Review	7
Decision Support Systems	7
Journal of Business Research	7
Journal of Computer Information Systems	7
Journal of Retailing	7
Marketing Management	7
IEEE Transactions on Systems, Man and Cybernetics, Part A	7
International Journal of Human-Computer Studies	3
Management of Engineering and Technology	3
MIT Sloan Management Review	3
Journal of Consumer Marketing	3
California Management Review	2
e-Service Journal	2
International Journal of Retail & Distribution Management	2
Journal of Advertising Research	2
Journal of Industrial Economics	2
Management Decision	2
Marketing Science	2
Psychology & Marketing	2
International Journal of Information Management	2
International Journal of Service Industry Management	2
Journal of Computer-Mediated Communication	2

3.3 Underlying Theory and Framework

As part of our analysis, we identified the theories that are used by the authors of the 351 papers surveyed. Findings show that the Theory of Reasoned Action (TRA) and its family theories including the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB) are the dominant theories in this area. Expectation-Confirmation Theory (ECT) and Innovation Diffusion Theory (IDT) have also been repeatedly tested in the study of online consumer behavior. Table 2 lists the five most frequently used theories and their corresponding references.

Table 2: References of Online Consumer Behavior Research

Theory	Reference
Expectation-Confirmation Theory	Bhattacharjee (2001a) Bhattacharjee (2001b) Khalifa and Liu (2001)
Innovation Diffusion Theory	Bhattacharjee (2000) Bhattacharjee (2001b) Goldsmith (2000) Parthasarathy and Bhattacharjee (1998) Senecal (2000) Siu and Cheng (2001)
Technology Acceptance Model	Bhattacharjee (2000) Bhattacharjee (2001a) Bhattacharjee (2001b) Chau, Au and Tam (2000) Childers et al. (2001) Heijden et al. (2001) Lee et al.(2001) Limayem and Khalifa (2000) Lin and Lu (2000) Keen et al. (2000) Parthasarathy and Bhattacharjee (1998) Pavlou (2001)
Theory of Planned Behavior	Bhattacharjee (2000) Bhattacharjee (2001a) Bhattacharjee (2001b) Jarvenpaa and Tractinsky (1999) Jarvenpaa et al. (2000) Keen et al. (2000) Limayem and Khalifa (2000) Limayem et al. (2000) Pavlou (2001) Shim et al. (2001) Song and Zahedi (2001)
Theory of Reasoned Action	Heijden et al. (2001) Jarvenpaa and Tractinsky (1999) Jarvenpaa et al. (2000) Jones and Vijayasarathy (1998) Keen et al. (2000) Kimelfeld and Watt (2001) Limayem et al. (2000) Shim et al.(2001) Vijayasarathy and Jones (2000)

The findings show that most authors depend heavily on theories from the TRA family (TPB, TAM, and TRA), while other useful theories such as the flow theory are ignored. Researchers, therefore, should try to explore new theories and frameworks and investigate online consumer behavior from different perspectives and angles.

4. An Integrated Framework for the Study of Online Consumer Behavior

As demonstrated in the previous section, the prevalence of the Internet has aroused enormous interest in the study of consumer-based electronic commerce in recent years. In

particular, the focus of these studies was on investigating factors affecting the intention and adoption of consumer online purchase.

Early studies in online consumer behavior largely sought to explore how consumers adopt and use online purchase. Specifically, the emphasis was on the antecedents of consumer online purchasing intention and adoption. Companies, however, have started to realize that in the digital economy, competitors are just a click away. Initial adoption by consumers is only the first step towards overall success, and companies that succeed in their e-business initiatives are adept at creating and maintaining a long-term sustainable relationship with loyal customers. Thus, research in the consumer continuance behavior (repurchase) becomes increasingly salient.

4.1 A Base Model

Our literature review revealed that no prior study has attempted to link the three key concepts of intention, adoption, and continuance and investigate the process of online consumer purchase as a whole. By integrating Fishbein's attitudinal theoretical model (Fishbein 1967) and the expectation-confirmation model (Oliver 1980), we attempt to associate the three elements together and form a base model – Model of Intention, Adoption, and Continuance (MIAC) (as depicted in Figure 2) for the development of an online consumer behavior framework.

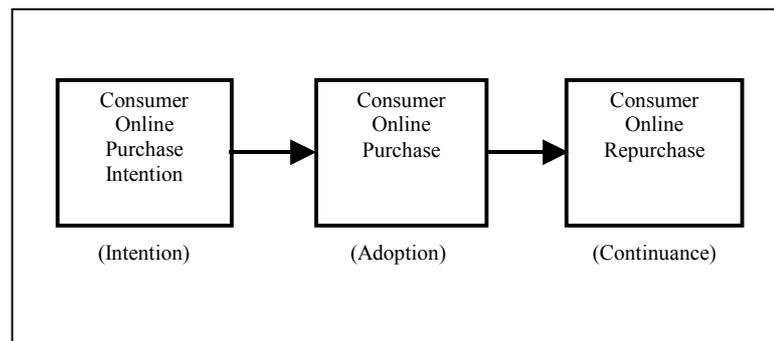


Figure 2: Model of Intention, Adoption, and Continuance (MIAC)

Fishbein's attitudinal model has been widely used in the marketing context (Lilien et al 1992) and this paradigm provides researchers with a useful lens for examining the factors explaining consumer purchasing intention and adoption. According to this model, behavior is predominantly determined by intention. Other factors like attitudes, subjective norms, and perceived behavioral control are also shown to be related to an appropriate set of salient behavioral, normative, and control beliefs about the behavior. However, Fishbein's model stops at the adoption level and does not capture other important factors that explain and predict consumer continuance behavior (repurchase).

The expectation-confirmation model (Oliver 1980), on the other hand, focuses on the post-purchase behavior. It is a widely used model in the consumer behavior literature, particularly in explaining consumer satisfaction and repeat purchase. Satisfaction is the central notion of this model and it is formed by the gap between expectation and perceived performance (Oliver 1980). The expectation-confirmation theory suggests that if the perceived performance meets one's expectation, confirmation is formed and consumers are satisfied. Bhattacharjee (2001b) stated that satisfied users are more likely to continue the IS use. Thus, we point that adoption and continuance are connected to

each other through several mediating and moderating factors such as trust and satisfaction.

4.2 A Framework for Online Consumer Behavior

Our analysis shows that online consumer behavior is still fragmented. For example, researchers such as Goldsmith (2000) and Limayem et al. (2000) found that personal innovativeness is a key personality trait that explains consumer online purchase intention. Chau et al (2000) examined the effects of presentation mode, search engines, and navigation structure of product items on the adoption of Internet shopping. Jarvenpaa et al (2000) concluded that trust in an Internet store is a salient determinant of online shopping. Finally, Lee (1999) focused on online repurchase and contended that consumer trust and consumer satisfaction were the key antecedents of continued purchase.

In order to capture the important factors explaining online behavior, we propose a unifying framework that could eventually guide research in this area. Through a close examination of the existing literature, five major domain areas including individual/consumer characteristics, environmental influences, product/service characteristics, medium characteristics, and online merchant and intermediary characteristics were identified.

4.2.1 Individual/Consumer Characteristics

The impact of Individual/Consumer characteristics on the adoption of IS/IT is a dominant research perspective in the IS literature (Zmud 1979). In the current study, individual/consumer characteristics refers to the factors specific to the consumer such as demographics, personality, value, lifestyle, attitude, consumer resources, consumer psychological factors (flow, satisfaction, trust), behavioral characteristics (looking for product information, access location, duration, and frequency of usage), motivation, and experience.

4.2.2 Environmental Influences

In addition to personal characteristics, marketing scholars such as Engel et al (2001) contend that environmental factors like culture, social influence, peer influence, and mass media play an important role in affecting consumer purchasing decisions. We believe that these factors are also relevant in the context of online consumer behavior and therefore include them in our framework.

4.2.3 Product/Service Characteristics

Jarvenpaa and Todd (1996) argue that price, quality, and product type are the three key elements in shaping consumers' perception. In suggested fragmentation, product/service characteristics mainly refer to knowledge about the product, product type, frequency of purchase, tangibility, differentiation and price.

4.2.4 Medium Characteristics

Characteristics of systems have been extensively studied in the IS literature. Traditional IS attributes such as ease of use, quality, security and reliability are included in the study of electronic commerce systems. Additionally, web specific factors such as ease of navigation, interface and network speed are also considered in the current study.

4.2.5 Online Merchants and Intermediaries Characteristics

Researchers such as Hoffman and Novak (1996) and Spiller and Lohse (1998) have suggested a broad classification of Internet retail stores as well as the key attributes and features of online stores. These studies provided us with a better insight into the study of online merchant and intermediary characteristics. In the current study, we included factors like service quality, privacy and security control, brand/reputation, delivery/logistic, after sales services and incentive in our framework of online consumer behavior.

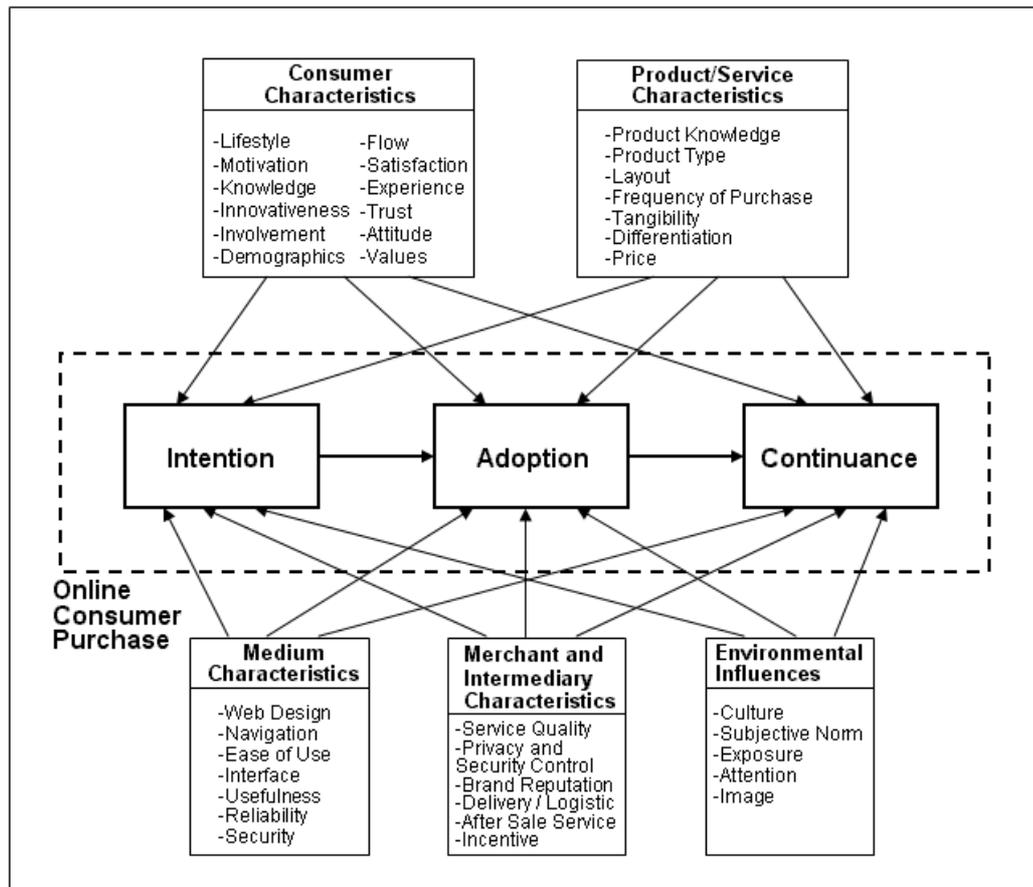


Figure 3: Framework of Online Consumer Behavior

These five domain areas were integrated into our base model (MIAC) to form a framework (as shown in Figure 3) for the study of online consumer behavior. This proposed framework not only provides us with a cohesive view of online consumer behavior, but also serves as a salient guidance for researchers in this research area.

4.3 Online Consumer Purchase Intention, Adoption, and Continuance

Intention, adoption, and continuance are the key building blocks of our proposed framework of online consumer behavior. In the following section, we implicitly investigated the three key elements by mapping prior literature into the five domains. Appendix A describes the extent to which each one of the factors was related to one of the three main building blocks. For example, the impact of age on intention was investigated by one study and the impact of age on adoption was investigated by seven studies. However, no study explored the link between age and continuance.

4.3.1 Consumer Online Purchase Intention

Based on the theory of reasoned action and other related theories in this research area, the key factors of attitude, subjective norm, and perceived behavior control are largely postulated as the determinants of consumer online purchase intention (e.g. Bhattacharjee 2000, Keen et al 2000, Limayem et al., 2000). Similarly, perceived ease of use and perceived usefulness stemming from technology acceptance model (TAM), have also received enormous attention (e.g. Chau et al 2000, Lin and Lu 2000).

Trust and perceived risk (e.g. Jarvenpaa et al 2000, Pavlou 2001, Ruyter et al 2001) have been widely investigated in the study of consumer online purchase intention. Some recent studies (e.g. Cheung and Lee 2001, Lee and Turban 2001) focused primarily on the trust formation process in the context of Internet shopping. In terms of product/service characteristics, are the key research topics are product type (e.g. Bobbitt and Dabholkar 2001, Sohn 1999) and price (e.g. Degeratu et al 2000, Liao and Cheung 2001). For instance, Sohn (1999) argued that products like CDs, books or canned food which do not require a physical examination before being purchased are easier to sell on the Internet. Brand/reputation (e.g. Jarvenpaa et al 2000, Ruyter et al 2001) and service quality (e.g. Ruyter et al 2001, Song and Zahedi 2001) are also important in affecting online purchase intentions.

4.3.2 Consumer Online Purchase (Adoption)

As is the case for consumer online purchase intention, researchers (e.g. Chau et al 2000, Goldsmith and Bridges 2000, Koufaris et al 2001, Limayem et al 2000, Raijas and Tuunainen 2001, Vellido et al 2000) extensively employed attitudinal theoretical models in the study of consumer online purchase and thoroughly investigated the antecedent factors like intention, attitude, subjective norm, perceived behavior control, ease of use, and perceived usefulness.

Moreover, we observed a significant number of empirical studies that proposed and tested factors affecting consumer online purchase. Compared to the study of intention, the studies of consumer online purchase are quite fragmented and widely dispersed in the five main categories. For examples, demographics (e.g. Bellman et al 1999, Bhatnagar et al 2000, Li et al 1999, Phau and Poon 2000, Ramaswami et al 2000) have been widely considered in the study of online consumer behavior. Researchers primarily investigated factors such as age, gender, income, education, and the like in determining consumer online purchase. In terms of medium characteristics, a number of web specific factors including navigation (e.g. Chau et al 2000, Liang and Lai 2002), interface (e.g. Schoenbachler and Gordon 2002), security (e.g. Goldsmith 2000, Kim and Lim 2001), accessibility (e.g. Chen and Sukpanich 1998, Lee 2002), social presence (e.g. Kumar and Benbasat 2001) and online shopping aid (Vijayarathy 2001) have been widely investigated in these prior studies. In terms of merchant and intermediary characteristics, factors like privacy and security protection (e.g. Kim and Lim 2001, Lee 2002) and brand/reputation (e.g. Ruyter et al 2001, Ward and Lee 2000) are frequently studied in consumer online purchase adoption.

4.3.3 Consumer Online Repurchase (Continuance)

Research on continuance is in its infancy. Bhattacharjee's (2001a) recent study is one of the very first attempts to explain consumer online repurchasing behavior. His proposed model was formulated on the basis of expectation and confirmation theory (ECT), and postulated satisfaction, confirmation, and loyalty incentives as salient factors affecting consumer online repurchasing.

Our literature review and analysis revealed that prior research on consumer online repurchase placed more emphasis on the impact of psychological factors. For instance, considerable attention has been given to the study of trust (Fung and Lee 1999, Lee et al 2000) and satisfaction formation (Khalifa and Liu 2001) in the context of consumer-based electronic commerce. Very few studies, however, have attempted to investigate the impact of product/service characteristics, medium characteristics, and merchant and intermediary characteristics on consumer online repurchasing. Liang and Lai (2002) was one recent study that explored the impact of web page design such as navigation, security, search attribute, and shopping aids. Similarly, Gefen and Devine (2001), focused on merchant characteristics and investigated the effect of service quality on consumer online purchase continuance using SERVQUAL.

5. Discussions

Electronic commerce is rapidly changing the way people do business all over the world. In the business-to-consumer segment, sales through the web have been increasing dramatically over the last few years. Customers, not only those from well-developed countries but also those from developing countries, are getting used to the new shopping channel. Understanding the factors that affect intention, adoption and repurchase are important for researchers and practitioners alike.

Our analysis of over 300 research articles on online consumer behavior has showed that this research area has received tremendous attention over the past few years. Most of the studies have borrowed theories from consumer behavior research and over emphasized the factors affecting a consumer's intention and adoption of online shopping while ignoring the factors leading to repurchase. Our review illustrates the need for a unifying framework that can guide research in this important area. Consequently, the proposed model (MIAC) shows how five important factors (consumer characteristics, environment influences, product/service characteristics, medium characteristics, merchant and intermediary characteristics) are related to three key elements (intention, adoption, repurchase).

5.1 Antecedents of Intention, Adoption and Continuance

Our findings confirm that online consumer behavior is still immature and exhibits an important research potential. The impact of several constructs of TPB, TRA and TAM such as attitude, subjective norms, and perceived behavioral control has been widely studied while other important factors have been ignored. As illustrated in Figure 3, factors related to consumer characteristics like demographics, personality, value, lifestyle, consumer resources, and knowledge were not explored. In addition, factors related to the medium characteristics (network availability, reliability, stability, speed, externalities, information quality, shopping aids medium richness and convenience), and environmental influences (culture and reference groups) have not been fully investigated in prior studies.

In terms of adoption, we found that consumer characteristics and medium characteristics are the key categories that most prior research explored. For example, characteristics such as demographics, lifestyle, motivation, behavioral characteristics, knowledge, attitude, intention, personal innovativeness, experience, trust, perceived risk, satisfaction, involvement and flow are well-tested and extensively studied. In addition, factors related to merchant and intermediary characteristics including website design, network reliability, search, network speed, usefulness, information quality, search attribute, shopping aids, channel, convenience and enjoyable are frequently explored.

Compared to intention and adoption, continuance is an under-researched area. The impact of factors like trust and satisfaction in the domain of consumer characteristics, ease of use, usefulness and search attribute in the domain of medium characteristics, and delivery in the domain of merchant and intermediary characteristics on continuance are yet to be investigated

6. Conclusion And Agenda for Future Research

The purpose of this study was to conduct a thorough analysis of the literature in the area of online consumer behavior. A research framework was suggested to better understand existing studies and to highlight under-researched areas. Our findings show that the literature on online consumer behavior is rather fragmented. Most studies investigated intention and adoption of online shopping while continuance behavior (repurchase) is seriously under-researched. Moreover, our analysis helped us to identify several fruitful directions for future research.

1. Future research could use our suggested intention, adoption and continuance (MIAC) framework as a basis to empirically explore the factors affecting the online consumer purchasing process.
2. Our findings show that existing studies focus on the factors affecting intention of buying from the web. They do that by using TRA and its related theories. We therefore encourage researchers to explore theories from different disciplines and use them to study consumers' adoption and continuance of online shopping. For example, Csikszentmihalyi (1975) introduced the concept of flow, which he defined as "the holistic experience that people feel when they act with total involvement". Some researchers (Csikszentmihalyi, 1990; Trevino and Webster, 1992; Ghani and Deshpande, 1994) advocated the use of the concept of flow to better understand purchase and repurchase from the web (Chen et al 1998; Rettie, 2001). We, therefore, believe flow theory is useful in explaining consumers' continuance behavior.
3. We invite researchers to pay more attention to the under-researched areas highlighted by our analysis. For instance, researchers can explore new variables in the five categories (consumer characteristics, environmental influences, product characteristics, medium characteristics, and merchant and intermediary characteristics) and empirically test how these factors affect intention, adoption and continuance.
4. Moe and Fader (2000) suggest that both planned and unplanned visit/purchase will affect future purchase decisions. However, our analysis of over 300 research articles showed that there are no studies examining unplanned purchase. Korfaris (2002) is the first to explore the relationship between unplanned and online consumer behavior. Unplanned behavior (for example, browsing visit without specific intention to buy) in fact is stimuli-driven and occasionally results in unplanned purchase (Janiszewski, 1998; Jarboe and McDaniel, 1987). We believe that the web provides several types of stimuli and we urge researchers to examine the process of online unplanned purchase.
5. Classical consumer behavioral theories provide researchers with a good starting point in understanding online consumer behavior. However, we should take the IT component into serious consideration when doing research in online consumer behavior. Instead of blindly borrowing theories and models from other disciplines, we as IS researchers should work out our own behavioral models declaring what is unique and specific to the context of consumer-based electronic commerce.

Finally, it is important to note that classical theories such as TRA and related theories constitute only a starting point in understanding online consumer behavior. Researchers

should carefully consider the artifact and its impact on online consumer behavior. Therefore, we believe that the time has come for IS researchers to start building their own theories instead of applying theories from other disciplines.

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References

- [1] P.J. Ambrose and G.J. Johnson, "A Trust Based Model of Buying Behavior in Electronic Retailing," *Proceedings of the Fourth Americas Conference on Information Systems (AMCIS 1998)*, 1998, pp. 263-265.
- [2] E.B. Andrade, "Identifying Discriminating Variables of Online and Offline Buyers: A Perceived-Risk Approach," *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, 2000, pp. 1386-1392.
- [3] S. Bellman, G.L. Lohse, and E.J. Johnson, "Predictors of online buying behavior," *Communications of the ACM*, vol. 42, no. 12, 1999, pp. 32-38.
- [4] J.R. Bettman, *An information Processing Theory of Consumer Choice*, Reading, Mass.: Addison-Wesley, 1979.
- [5] A. Bhatnagar, S. Misra, and H.R. Rao, "On risk, convenience, and Internet shopping behavior - Why some consumers are online shoppers while others are not," *Communications of the ACM*, vol. 43, no. 11, 2000, pp. 98-105.
- [6] A. Bhattacharjee, "Acceptance of e-commerce services: the case of electronic brokerages," *IEEE Transactions on Systems, Man and Cybernetics, Part A*, vol. 30, no. 4, 2000, pp. 411-420.
- [7] A. Bhattacharjee, "An empirical analysis of the antecedents of electronic commerce service continuance," *Decision support systems*, vol. 32, no. 2, 2001a, pp. 201-214.
- [8] A. Bhattacharjee, "Understanding Information Systems Continuance: An Expectation Confirmation Model," *MIS Quarterly*, vol. 25, no. 3, 2001b, pp. 351-370.
- [9] L.M. Bobbitt and P.A. Dabholkar, "Integrating attitudinal theories to understand and predict use of technology-based self-service: The Internet as an illustration," *International Journal of Service Industry Management*, vol. 12, no. 5, 2001, pp. 423-450.
- [10] A. Borchers, "Trust In Internet Shopping: A Test Of A Measurement Instrument," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001, pp. 799-803.
- [11] K.K. Boyer, R. Hallowell, and A.V. Roth, "E-services: operating strategy. A case study and a method for analyzing operational benefits," *Journal of Operations Management*, vol. 20, no. 2, 2002, pp. 175-188.

- [12] T. Case, O.M. Burns, and G.N. Dick, "Drivers Of On-Line Purchasing Among U.S. University Students," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001, pp. 873-878.
- [13] P.Y.K. Chau, G. Au, and K.Y. Tam, "Impact of Information Presentation Modes on Online Shopping: An Empirical Evaluation of a Broadband Interactive Shopping Service," *Journal of Organizational Computing and Electronic Commerce*, vol. 10, no. 1, 2000, pp. 1-22.
- [14] L D. Chen and N. Sukpanich, "Assessing Consumers' Involvement in Internet Purchasing," *Proceedings of the Fourth Americas Conference on Information Systems (AMCIS 1998)*, 1998, pp. 281-283.
- [15] H. Chen, R.T. Wignad, and M. Nilan, , "Optimal flow experience in Web Navigation", *Effective Utilization and Management of Emerging Information Technologies, 9th Information Resources Management Association International Conference*, Idea Group Publishing, Boston, MA, 1998.
- [16] C.M.K. Cheung and M.K.O. Lee, "Trust in Internet Shopping: Instrument Development and Validation Through Classical and Modern Approaches," *Journal of Global Information Management*, vol. 9, no. 3, 2001, pp. 23-32.
- [17] C.M.K. Cheung and M.K.O. Lee, "Trust in Internet Shopping: A Proposed Model and Measurement Instrument," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001a, pp. 681-689.
- [18] T.L. Childers, C.L. Carr, J. Peck, and S. Carson, "Hedonic and utilitarian motivations for online retail shopping behavior," *Journal of Retailing*, vol. 77, no. 4, 2001, pp. 511-535.
- [19] A.V. Citrin, D.E. Sprott, S.N. Silverman, and D.E. Stem, "Adoption of internet shopping: the role of consumer innovativeness," *Industrial management & data systems*, vol. 100, no. 7, 2000, pp. 294-300.
- [20] M. Csikszentmihalyi, *Beyond Boredom and Anxiety*, Jossey-Bass, San Francisco, CA, 1975
- [21] M. Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*, Harper & Row, New York, NY, 1990
- [22] A.M. Degeratu, A. Rangaswamy, and J. Wub, "Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes," *International Journal of Research in Marketing*, vol. 17, no. 1, 2000, pp. 55-78.
- [23] K. Dobie, J. Grant, and K. Ready, "Product motivation and purchasing activity: An exploratory study of consumers' intention purchasing activity," *Journal of Promotion Management*, vol. 6, no. 1/2, 2001, pp. 31-43.
- [24] S.P. Douglas, M.A. Morrin, and C.S. Craig, "Cross-national consumer research traditions," in G. Laurent, G. Lilien, and B. Bras, ed., *Research Traditions in Marketing*, Kluwer, Boston, MA: 1994.
- [25] J.F. Engel, R.D. Blackwell, and P.W. Miniard, *Consumer Behavior*, The Dryden Press Series in Marketing, 2001.
- [26] S.A. Eroglu, K.A. Machleit, and L.M. Davis, "Atmospheric qualities of online retailing - A conceptual model and implications," *Journal of Business Research*, vol. 54, no. 2, 2001, pp. 177-184.

- [27] M. Fishbein, "Attitude and Prediction of Behavior," in M. Fishbein, ed., *Readings in Attitude Theory and Measurement*, New York: John Wiley, 1967, pp. 477-492.
- [28] V.S. Folkes, "Recent Attribution Research in Consumer Behavior: A Review and New Directions," *Journal of Consumer Research*, vol. 14, 1988, pp. 548-565.
- [29] R.K.K. Fung and M.K.O. Lee, "EC-Trust (Trust in Electronic Commerce): Exploring the Antecedent Factors," *Proceedings of the Fifth Americas Conference on Information Systems (AMCIS 1999)*, 1999, pp. 517-519.
- [30] D. Gefen and P. Devine, "Customer Loyalty to An Online Store: The Meaning of Online Service Quality," *Proceedings of the International Conference of Information Systems 2001*, 2001, pp. 613-618.
- [31] J.A. Ghani, and S.P. Deshpande "Task characteristics and the experience of optimal flow in human-computer interaction", *Journal of Psychology*, Vol. 128 No. 4, 1994, pp.381-91.
- [32] R.E. Goldsmith, "How Innovativeness Differentiates Online Buyers," *Quarterly Journal of Electronic Commerce*, vol. 1, no. 4, 2000, pp. 323-333.
- [33] R.E. Goldsmith and E. Bridges, "E-Tailing VS Retailing: Using Attitudes to Predict Online Buying Behavior," *Quarterly Journal of Electronic Commerce*, vol. 1, no. 3, 2000, pp. 245-253.
- [34] R.E. Goldsmith, "Using the domain specific innovativeness scale to identify innovative Internet consumers," *Internet Research: Electronic Networking Applications and Policy*, vol. 11, no. 2, 2001, pp. 149-158.
- [35] E.E. Grandon and C. Ranganathan, "The Impact Of Content And Design Of Web Sites On Online Sales," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001, pp. 920-926.
- [36] D.A. Griffith, R.F. Krampf, and J.W. Palmer, "The Role of Interface in Electronic Commerce: Consumer Involvement with Print Versus On-Line Catalogs," *International Journal of Electronic Commerce*, vol. 5, no. 4, 2001, pp. 134-153.
- [37] H.J. Han, R. Ocker, and J. Fjermestad, "An Investigation Of University Students' On-Line Shopping Behavior," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001, pp. 930-933.
- [38] G. Haubl and V. Trifts, "Consumer decision making in online shopping environments: The effects of interactive decision aids," *Marketing Science*, vol. 19, no. 1, 2000, pp. 4-21.
- [39] H.v.d. Heijden, T. Verhagen, and M. Creemers, "Predicting online purchase behavior: replications and tests of competing models," *Proceedings of the 34th Annual Hawaii International Conference on System Sciences*, Maui, HI, USA, 2001, IEEE Comput. Soc, Los Alamitos, CA.
- [40] C.-F. Ho and W.-H. Wu, "Antecedents of customer satisfaction on the Internet: an empirical study of online shopping," *Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences*, Maui, HI, USA, 1999, IEEE Comput. Soc, Los Alamitos, CA.
- [41] D.L. Hoffman and T.P. Novak, "Marketing in Hypermedia Computer-mediated Environments: Conceptual Foundations," *Journal of Marketing*, vol. 60, no. July, 1996, pp. 50-68.
- [42] M.-H. Huang, "Information load: its relationship to online exploratory and shopping behavior," *International Journal of Information Management*, vol. 20, no. 5, 2000, pp. 337-347.

- [43] C. Janiszewski, "The Influence of Display Characteristics on Visual Exploratory Search Behavior" *Journal of Consumer Research*, vol 25, no. 3, 1998, pp. 290-301
- [44] G. R. Jarboe, and C. D. McDaniel. "A Profile of Browsers in Regional Shopping Malls" *Journal of the Academy of Marketing Science*, vol 15, Spring, 1987, pp. 46-53
- [45] S.L. Jarvenpaa and P.A. Todd, "Consumer reactions to electronic shopping on the World Wide Web," *International Journal of Electronic Commerce*, vol. 1, no. 2, 1996, pp. 59-88.
- [46] S.L. Jarvenpaa, "Consumer Trust in an internet Store: A Cross-Cultural Validation," *Journal of Computer-Mediated Communication*, vol. 5, no. 2, 1999.
- [47] S.L. Jarvenpaa, N. Tractinsky, and M. Vitale, "Consumer Trust in An Internet Store," *Information Technology & Management*, vol. 1, no. 1-2, 2000, pp. 45-71.
- [48] J.M. Jones and L.R. Vijayasarathy, "Internet consumer catalog shopping: findings from an exploratory study and directions for future research," *Internet Research: Electronic Networking Applications and Policy*, vol. 8, no. 4, 1998, pp. 322-330.
- [49] L. Jungwon, K. Jinwoo, and M.Y. Jae, "What makes Internet Users visit Cyber Stores again? Key Design Factors for Customer Loyalty," *Proceedings of the Conference on Human Factors in Computing Systems*, The Hague, Netherlands, 2000.
- [50] P.K. Kannan and P.K. Kopalle, "Dynamic pricing on the Internet: importance and implications for consumer behavior," *International Journal of Electronic Commerce*, vol. 5, no. 3, 2001, pp. 63-83.
- [51] C. Keen, K.D. Ruyter, M. Wetzels, and R. Feinberg, "An Empirical Analysis of Consumer Preferences Regarding Alternative Service Delivery Modes in Emerging Electronic Service Markets," *Quarterly Journal of Electronic Commerce*, vol. 1, no. 1, 2000, pp. 31-47.
- [52] M. Khalifa and V. Liu, "Satisfaction with Internet-based Services: A Longitudinal Study," *Proceedings of the International Conference of Information Systems 2001*, 2001, pp. 601-606.
- [53] D.J. Kim, B. Cho, and H.R. Rao, "Effects Of Consumer Lifestyles On Purchasing Behavior On The Internet: A Conceptual Framework And Empirical Validation," *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, 2000, pp. 688-695.
- [54] S.Y. Kim and Y.J. Lim, "Consumers' Perceived Importance of and Satisfaction with Internet Shopping," *Electronic Markets*, vol. 11, no. 3, 2001, pp. 148-154.
- [55] Y.M. Kimelfeld and J.H. Watt, "The pragmatic value of on-line transactional advertising: a predictor of purchase intention," *Journal of Marketing Communications*, vol. 7, 2001, pp. 137-157.
- [56] T. Koivumaki, "Customer Satisfaction and Purchasing Behavior in a Web-based Shopping Environment," *Electronic Markets*, vol. 11, no. 3, 2001, pp. 186-192.
- [57] M. Koufaris, A. Kambil, and P.A. Labarbera, "Consumer Behavior in Web-Based Commerce: An Empirical Study," *International Journal of Electronic Commerce*, vol. 6, no. 2, 2001, pp. 115-138.

- [58] M. Koufaris, "Applying the Technology Acceptance Model and Flow Theory to Online Consumer Behavior", *Information System Research*, Vol. 13 No. 2, 2002, pp. 205-223
- [59] N. Kumar and I. Benbasat, "Shopping as Experience and Web Site as a Social Actor: Web Interface Design and Para-Social Presence," *Proceedings of the Twenty-Second International Conference on Information Systems*, 2001, pp. 449-454.
- [60] M.K.O. Lee, "Comprehensive Model of Internet Consumer Satisfaction," *unpublished working paper, City University of Hong Kong*, 1999.
- [61] J. Lee, J. Kim, and J.Y. Moon, "What makes Internet users visit cyber stores again? Key design factors for customer loyalty," *Proceedings of the Conference on Human Factors in Computing Systems*, The Hague, Netherlands, 2000, pp. 305-312.
- [62] D. Lee and J. Park, "On the Explanation of Factors Affecting E-Commerce Adoption," *Proceedings of the International Conference of Information Systems 2001*, 2001, pp. 109-120.
- [63] M.K.O. Lee and E. Turban, "A trust model for consumer Internet shopping," *International Journal of Electronic Commerce*, vol. 6, no. 1, 2001, pp. 75-91.
- [64] P.M. Lee, "Behavioral Model of Online Purchasers in E-Commerce Environment," *Electronic Commerce Research*, vol. 2, no. 1-2, 2002, pp. 75-85.
- [65] H. Li, C. Kuo, and M.G. Russell, "The Impact of Perceived Channel Utilities, Shopping Orientations, and Demographics on the Consumer's Online Buying Behavior," *Journal of Computer-Mediated Communication*, vol. 5, no. 2, 1999, pp.
- [66] T.P. Liang and J.S. Huang, "An empirical study on consumer acceptance of products in electronic markets: a transaction cost model," *Decision Support Systems*, vol. 24, 1998, pp. 29-43.
- [67] T.P. Liang and H.J. Lai, "Effect of Store Design on Consumer Purchases: An Empirical Study of on-line bookstores," *Information & Management*, vol. 39, no. 6, 2002, pp. 431-444.
- [68] Z. Liao and M. Cheung, "Internet-based e-shopping and consumer attitudes: an empirical study," *Information & Management*, vol. 38, no. 5, 2001, pp. 299-306.
- [69] G.L. Lilien, K. Philip, and M.K. Sridhar, *Marketing Models*, New Jersey: Prentice Hall, 1992.
- [70] M. Limayem and M. Khalifa, "Business-to-Consumer Electronic Commerce: A Longitudinal Study," *Proceedings of the Fifth IEEE Symposium on Computers and Communications*, 2000, pp. 286-290.
- [71] M. Limayem, M. Khalifa, and A. Frini, "What makes consumers buy from Internet? A longitudinal study of online shopping," *IEEE Transactions on Systems, Man & Cybernetics, Part A (Systems & Humans)*, vol. 30, no. 4, 2000, pp. 421-432.
- [72] J.C.-C. Lin and H. Lu, "Towards an understanding of the behavioral intention to use a web site," *International Journal of Information Management*, vol. 20, no. 3, 2000, pp. 197-208.
- [73] C. Liu and K. Arnett, "Assessing the Customer Behavioral Intentions on the Web: A Research Model," *Proceedings of the Fifth Americas Conference on Information Systems (AMCIS 1999)*, Milwaukee, WI, USA, 1999, Assoc. Inf. Syst, Atlanta, GA, pp. 307-309.

- [74] D. Luna and S.F. Gupta, "An integrative framework for cross-cultural consumer behavior," *International Marketing Review*, vol. 18, no. 1, 2001, pp. 45-69.
- [75] A.D. Miyazaki and A. Fernandez, "Consumer Perceptions of Privacy and Security Risks for Online Shopping," *The Journal of Consumer Affairs*, vol. 35, no. 1, 2001, pp. 27-44.
- [76] W.W. Moe and P.S. Fader, "Uncovering Patterns in Cybershopping," *California Management Review*, vol. 43, no. 4, 2001, pp. 106-117.
- [77] W. W. Moe and P. S. Fader, "Which Visits Lead to Purchase? Dynamic Conversion Behavior at e-commerce Sites" University of Texas, 2000
- [78] A. Muthitacharoen, "Consumer's Preference between the Internet and Conventional Stores (An Exploratory Study)," *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, 2000, pp. 1373-1379.
- [79] D. Nel, R.v. Niekerk, J.-P. Berthon, and T. Davies, "Going with the flow: Web sites and customer involvement," *Internet Research: Electronic Networking Applications and Policy*, vol. 9, no. 2, 1999, pp. 109-116.
- [80] R.L. Oliver, "A Cognitive Model for the Antecedents and Consequences of Satisfaction," *Journal of Marketing Research*, no. 17, 1980, pp. 460-469.
- [81] C. Page and E. Lepkowska-White, "Web Equity: A Framework for Building Consumer Value in Online Companies," *Journal of Consumer Marketing*, vol. 19, no. 3, 2002, pp. 231-248.
- [82] M. Parthasarathy and A. Bhattacharjee, "Understanding post-adoption behavior in the behavior in the context of online services," *Information Systems Research*, vol. 9, no. 4, 1998, pp. 362-379.
- [83] P.A. Pavlou, "Integrating Trust In Electronic Commerce With The Technology Acceptance Model: Model Development And Validation," *Proceedings of the Seventh Americas Conference on Information Systems (AMCIS 2001)*, 2001, pp. 816-822.
- [84] R.E. Pereira, "Factors Influencing Consumer Purchasing Behavior in Electronic Commerce," *Proceedings of the Fourth Americas Conference on Information Systems (AMCIS 1998)*, 1998, pp. 450-452.
- [85] I. Phau and S.M. Poon, "Factors influencing the types of products and services purchased over the Internet," *Internet Research: Electronic Networking Applications And Policy*, vol. 10, no. 2, 2000, pp. 102-113.
- [86] I. Phau and S.M. Poon, "An Exploratory Study of Cybershopping in Singapore," *Quarterly Journal of Electronic Commerce*, vol. 1, no. 1, 2000a, pp. 61-75.
- [87] A. Raijas and V.K. Tuunainen, "Critical factors in electronic grocery shopping," *International Review of Retail, Distribution and Consumer Research*, vol. 11, no. 3, 2001, pp. 255-265.
- [88] S.N. Ramaswami, T.J. Strader, and K. Brett, "Determinants of on-line channel use for purchasing financial products," *International Journal of Electronic Commerce*, vol. 5, no. 2, 2000, pp. 95-118.
- [89] C. Ranganathan and S. Ganapathy, "Key dimensions of business-to-consumer web sites," *Information & Management*, vol. 39, no. 6, 2002, pp. 457-465.
- [90] R. Rettie, "An exploration of flow during Internet use", *Internet Research: Electronic Networking Applications and Policy*, Vol. 11 No. 2, 2001, pp. 103-113

- [91] K.d. Ruyter, M. Wetzels, and M. Kleijnen, "Customer adoption of e-service: an experimental study," *International Journal of Service Industry Management*, vol. 12, no. 2, 2001, pp. 184-207.
- [92] D.D. Schoenbachler and G.L. Gordon, "Multi-channel shopping: understanding what drives channel choice," *Journal of Consumer Marketing*, vol. 19, no. 1, 2002, pp. 42-53.
- [93] S. Senecal, "Stopping Variables in Online Buying Processes: An Innovation Diffusion Approach," *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, 2000, pp. 1380-1385.
- [94] S. Shim, M.A. Eastlick, S.L. Lotz, and P. Warrington, "An online prepurchase intentions model: the role of intention to search," *Journal of retailing*, vol. 77, 2001, pp. 397-416.
- [95] N.Y.M. Siu and M.M.-S. Cheng, "A study of the expected adoption of online shopping - the case of Hong Kong," *Journal of International Consumer Marketing*, vol. 13, no. 3, 2001, pp. 87-106.
- [96] B.F. Skinner, *The Behavior of Organisms: An Experimental Analysis*, New York: Appleton Century Crofts, 1938.
- [97] C. Sohn, "The Properties of Internet-based Markets and Customers' Behavior," *Proceedings of the Fifth Americas Conference on Information Systems (AMCIS 1999)*, 1999.
- [98] J. Song and F.M. Zahedi, "Web Design In E-Commerce: A Theory And Empirical Analysis," *Proceedings of the International Conference of Information Systems 2001*, 2001, pp. 205-220.
- [99] P. Spiller and G. L. Lohse, "A classification of internet retail stores", *International Journal of Electronic Commerce*, Vol.2, No.2, 1998, pp.29-56
- [100] L.F. Spiteri, "Information architecture of business-to-consumer e-commerce websites. Part I: The online catalogue of selected video retailers," *Journal of Information Science*, vol. 27, no. 4, 2001, pp. 239-248.
- [101] N. Sukpanich and L. Chen, "Antecedents of desirable consumer behaviors in electronic commerce," *Proceedings of the Fifth Americas Conference on Information Systems (AMCIS 1999)*, Milwaukee, WI, USA, 1999, Assoc. Inf. Syst, Atlanta, GA, pp. 550-552.
- [102] L.K. Trevino and J. Webster, "Flow in computer-mediated communication", *Communication Research*, Vol. 19 No. 5, 1992, pp.539-73.
- [103] A. Vellido, P.J.G. Lisboa, and K. Meehan, "Quantitative characterization and prediction of on-line purchasing behavior: A latent variable approach," *International Journal of Electronic Commerce*, vol. 4, no. 4, 2000, pp. 83-104.
- [104] L.R. Vijayarathy and J.M. Jones, "Intentions to shop using Internet catalogues: exploring the effects of product types, shopping orientations, and attitudes towards computers," *Electronic Markets*, vol. 10, no. 1, 2000a, pp. 29-38.
- [105] L.R. Vijayarathy and J.M. Jones, "Print and Internet catalog shopping: assessing attitudes and intentions," *Internet Research: Electronic Networking Applications and Policy*, vol. 10, no. 3, 2000b, pp. 191-202.
- [106] L.R. Vijayarathy, "The Impact of Shopping Orientations, Product Types, and Shopping Aids on Attitude and Intention to Use Online Shopping," *Quarterly Journal of Electronic Commerce*, vol. 2, no. 2, 2001, pp. 99-113.

- [107] L.R. Vijayasathay and J.M. Jones, "Do Internet shopping aids make a difference? An empirical investigation," *Electronic Markets*, vol. 11, no. 1, 2001, pp. 75-83.
- [108] A.P. Vrechopoulos, G.J. Siomkos, and G.I. Doukidis, "Internet shopping adoption by Greek consumers," *European Journal of Innovation Management*, vol. 4, no. 3, 2001, pp. 142-153.
- [109] M.R. Ward and M.J. Lee, "Internet shopping, consumer search and product branding," *Journal of Product & Brand Management*, vol. 9, no. 1, 2000, pp. 6-20.
- [110] T.B. Warrington, N.J. Abgrab, and H.M. Caldwell, "Building trust to Develop Competitive Advantage in E-Business Relationships," *Competitiveness Review*, vol. 10, no. 2, 2000, pp. 160-168.
- [111] J. Webster and R.T. Watson, "Analyzing the Past to Prepare for the Future: Writing a Literature Review (pp. xiii-xxiii)," *MIS Quarterly*, vol. 26, no. 2, 2002, pp. xiii-xxiii (13-23).
- [112] G.K. White and B.J. Manning, "Commercial WWW site appeal: how does it affect online food and drink consumers' purchasing behavior?," *Internet Research: Electronic Networking Applications and Policy*, vol. 8, no. 1, 1998, pp. 32-38.
- [113] M. Wolfenbarger and M. Gilly, "Consumer Motivations for Online Shopping," *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, 2000, pp. 1362-1366.
- [114] M. Wolfenbarger and M.C. Gilly, "Shopping Online for Freedom, Control, And Fun," *California Management Review*, vol. 43, no. 2, 2001, pp. 34-55.
- [115] R.W. Zmud, "Individual differences and MIS success: A review of the empirical literature" *Management Science*, Vol. 25, 1979, pp.966-979.

Appendix A – Analysis Table

		Online Consumer Behavior		
		Intention	Adoption	Continuance
Consumer Characteristics				
Demographics		Sohn 1999	Schoenbachler and Gordon 2002	
	Age	White and Manning 1998	Bellman et al 1999 Bhatnagar et al 2000 Case et al 2001 Kim and Lim 2001 Phau and Poon 2000 Raijas and Tuunainen 2001 Vrechopoulos et al 2001	
	Income	White and Manning 1998	Bellman et al 1999 Case et al 2001 Kim, Cho and Rao 2000 Kim and Lim 2001 Kim et al 2000 Koivumaki 2001 Li et al 1999 Phau and Poon 2000 Raijas and Tuunainen 2001 Ramaswami et al 2000 Siu and Cheng 2001 Vrechopoulos et al 2001	
	Education	Liao and Cheung 2001	Bellman et al 1999 Case et al 2001 Kim and Lim 2001 Li et al 1999 Pereira 1998 Phau and Poon 2000 Vrechopoulos et al 2001	
	Occupation		Kim and Lim 2001 Raijas and Tuunainen 2001 Vrechopoulos et al 2001	
	Computer Usage		Case et al 2001 Han et al 2001 Phau and Poon 2000	
	Internet Usage	Liao and Cheung 2001	Bhatnagar et al 2000 Case et al 2001 Citrin et al 2000	
	Race		Bellman et al 1999	
	Gender	White and Manning 1998	Bellman et al 1999 Bhatnagar et al 2000 Case et al 2001 Kim and Lim 2001 Li et al 1999 Vrechopoulos et al 2001	
	Household Size		Raijas and Tuunainen 2001	
	Marital Status		Bhatnagar et al 2000 Kim and Lim 2001 Vrechopoulos et al 2001	
	Personality		Eroglu et al 2001 Jones and Vijayasathy 1998	
Value		Goldsmith and Bridges 2000	Boyer et al 2002	
Lifestyle		Kim, Cho and Rao 2000 Kim et al 2000 Pereira 1998 Schoenbachler and Gordon 2002		
Consumer Resources	Time	Bobbitt and Dabholkar 2001	Bobbitt and Dabholkar 2001 Ramaswami et al 2000	

Behavioral Characteristics	Looking for product information	Shim et al 2001	Bellman et al 1999 Ramaswami et al 2000	
	Access Location		Bellman et al 1999 Bhatnagar et al 2000	
	Duration		Bellman et al 1999 Han et al 2001 Miyazaki and Fernandez 2001	
	Frequency		Miyazaki and Fernandez 2001	
	Return behavior		Schoenbachler and Gordon 2002	
Motivation		Ambrose and Johnson 1998 Liu and Arnett 1999 Song and Zahedi 2001 Vijayarathy and Jones 2000a	Ambrose and Johnson 1998 Childers et al 2001 Dobie et al 2001 Moe and Fader 2001 Schoenbachler and Gordon 2002 Wolfenbarger and Gilly 2000	
Knowledge			Han et al 2001	
Attitude		Bhattacharjee 2000 Bobbitt and Dabholkar 2001 Chau et al 2000 Griffith et al 2001 Heijden et al 2001 Keen et al 2000 Kimelfeld and Watt 2001 Limayem and Khalifa 2000 Limayem et al 2000 Lin and Lu 2000 Jarvenpaa et al 1999 Jarvenpaa et al 2000 Shim et al 2001 Song and Zahedi 2001 Vijayarathy and Jones 2000a	Bobbitt and Dabholkar 2001 Chau et al 2000 Childers et al 2001 Goldsmith and Bridges 2000 Limayem and Khalifa 2000 Limayem et al 2000 Muthitacharoen 2000 Pereira 1998 Siu and Cheng 2001 Sukpanich and Chen 1999	
Intention			Bobbitt and Dabholkar 2001 Chau et al 2000 Limayem and Khalifa 2000 Limayem et al 2000	
Personal Innovativeness		Limayem and Khalifa 2000 Limayem et al 2000 Sohn 1999	Citrin et al 2000 Goldsmith 2000 Goldsmith 2001 Limayem and Khalifa 2000 Limayem et al 2000 Raijas and Tuunainen 2001	
Perceived Consequence		Limayem and Khalifa 2000 Limayem et al 2000	Limayem and Khalifa 2000 Limayem et al 2000	
Experience		Bhatnagar et al 2000 Shim et al 2001 Vijayarathy and Jones 2000a	Chen and Sukpanich 1999 Childers et al 2001 Han et al 2001 Jarvenpaa and Todd 1996 Koufaris et al 2002 Lee 2002 Li et al 1999 Schoenbachler and Gordon 2002 Vrechopoulos et al 2001	Koufaris et al 2002
Trust		Ambrose and Johnson 1998 Heijden et al 2001 Jarvenpaa et al 1999 Jarvenpaa et al 2000 Jarvenpaa and Tractinsky 1999 Pavlou 2001 Ruyter et al 2000	Ambrose and Johnson 1998 Borchers 2001 Chen and Sukpanich 1998 Cheung and Lee 1999 Cheung and Lee 2001 Goldsmith 2000 Lee 2002 Lee and Turban 2001 Warrington et al 2000	Fung and Lee 1999 Lee 1999 Lee et al 2000 Lee, Kim, Moon 2000 Warrington et al 2000

Perceived Risk	Bhatnagar et al 2000 Heijden et al 2001 Jarvenpaa et al 1999 Jarvenpaa et al 2000 Jarvenpaa and Tractinsky 1999 Pavlou 2001 Ruyter et al 2000 Ruyter et al 2001 Vijayasathy and Jones 2000a	Andrade 2000 Bobbitt and Dabholkar 2001 Jarvenpaa and Todd 1996 Kim, Cho and Rao 2000 Kim et al 2000 Lee, Park, and Ahn 2001 Miyazaki and Fernandez 2001 Pereira 1998 Ruyter et al 2001 Schoenbachler and Gordon 2002 Siu and Cheng 2001 Vellido et al 2000	
Perceived Benefit	Ruyter et al 2000	Kim, Cho and Rao 2000 Siu and Cheng 2001	
Perceived Internet store Size	Heijden et al 2001 Jarvenpaa et al 1999 Jarvenpaa et al 2000		
Satisfaction		Ho and Wu 1999 Koivumaki 2001 Ramaswami et al 2000	Bhattacharjee 2001a Bhattacharjee 2001b Fung and Lee 1999 Ho and Wu 1999 Khalifa and Liu 2001 Lee 1999 Lee et al 2000 Ramaswami et al 2000
Involvement	Griffith et al 2001 Liu and Arnett 1999	Chen and Sukpanich 1998 Eroglu et al 2000 Eroglu et al 2001 Koufaris et al 2002 Pereira 1998 Wolfenbarger and Gilly 2000 Wolfenbarger and Gilly 2001	Koufaris et al 2002
Shopping Enjoyment		Koufaris et al 2002	Koufaris et al 2002
Shopping Orientation	Vijayasathy and Jones 2000a Vijayasathy and Jones 2000b Vijayasathy 2001	Li et al 1999	
Flow	Control		Nel et al 1999
	Attention Focus		Nel et al 1999
	Curiosity		Nel et al 1999
	Intrinsic Interest		Nel et al 1999 Wolfenbarger and Gilly 2000 Wolfenbarger and Gilly 2001
	Positive challenges		Koufaris et al 2002
Confirmation			Bhattacharjee 2001a Bhattacharjee 2001b
Preference	Liu and Arnett 1999	Chen and Sukpanich 1998 Vrechopoulos et al 2001	
Stickiness			Boyer et al 2002
Environmental Influences			
Culture		Luna and Gupta 2001 Pereira 1998	
Subjective Norm	Bhattacharjee 2000 Keen et al 2000 Limayem and Khalifa 2000 Limayem et al 2000 Shim et al 2001 Song and Zahedi 2001 Vijayasathy and Jones 2000a	Limayem and Khalifa 2000 Limayem et al 2000 Jones and Vijayasathy 1998 Pereira 1998 Siu and Cheng 2001	Parthasarathy and Bhattacharjee 1998

Perceived Behavioral Control	Bhattacharjee 2000 Bobbitt and Dabholkar 2001 Keen et al 2000 Limayem and Khalifa 2000 Limayem et al 2000 Shim et al 2001 Song and Zahedi 2001	Bobbitt and Dabholkar 2001 Chen and Sukpanich 1998 Koufaris et al 2002 Limayem and Khalifa 2000 Limayem et al 2000 Senecal 2000	Koufaris et al 2002
Exposure	Kimelfeld and Watt 2001 Sohn 1999	Kim and Lim 2001	Parthasarathy and Bhattacharjee 1998
Attention			Page and White 2002
Awareness			Page and White 2002
Image			Page and White 2002
Reference Group			Page and White 2002
Product/Service Characteristics			
Product Knowledge	Bobbitt and Dabholkar 2001 Griffith et al 2001	Bobbitt and Dabholkar 2001 Lee and Park 2001 Lee 2002 Ramaswami et al 2000	
Product Type	Bobbitt and Dabholkar 2001 White and Manning 1998 Liao and Cheung 2001 Vijayarathy and Jones 2000b Vijayarathy 2001 Sohn 1999	Andrade 2000 Bhatnagar et al 2000 Bobbitt and Dabholkar 2001 Ho and Wu 1999 Phau and Poon 2000 Schoenbachler and Gordon 2002 Stark and Meier 2001	
Layout		Phau and Poon 2000 Phau and Poon 2000b	
Frequency of Purchase		Phau and Poon 2000 Phau and Poon 2000b	
Utilization		Goldsmith 2000	
Tangibility		Jarvenpaa and Todd 1996 Phau and Poon 2000 Phau and Poon 2000b	
Differentiation		Jarvenpaa and Todd 1996 Pereira 1998 Phau and Poon 2000 Phau and Poon 2000b	
Price	Degeratu et al 2000 Liao and Cheung 2001 Sohn 1999 Song and Zahedi 2001 Vijayarathy and Jones 2000a	Jarvenpaa and Todd 1996 Schoenbachler and Gordon 2002	Page and White 2002
Medium Characteristics			
Website Design	Ranganathan and Ganapathy 2002	Grandon and Ranganathan 2001 Ho and Wu 1999 Kim and Lim 2001 Schoenbachler and Gordon 2002	
Social Presence		Kumar and Benbasat 2001 Siu and Cheng 2001	
Navigation	Chau et al 2000	Chau et al 2000 Chiders et al 2001 Grandon and Ranganathan 2001 Lee and Park 2001 Lee 2002 Liang and Lai 2002	Liang and Lai 2002 Page and White 2002

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	Ease of Use	Bhattacharjee 2000 Chau et al 2000 Heijden et al 2001 Keen et al 2000 Lin and Lu 2000 Pavlou 2001	Chau et al 2000 Chiders et al 2001 Goldsmith and Bridges 2000 Lee, Park, and Ahn 2001 Liang and Lai 2002 Rajjas and Tuunainen 2001 Siu and Cheng 2001 Vellido et al 2000	Lee 1999 Liang and Lai 2002 Page and White 2002 Parthasarathy and Bhattacharjee 1998
	Interface	Griffith et al 2001 Sohn 1999 Song and Zahedi 2001	Koivumaki 2001 Schoenbachler and Gordon 2002	
Availability			Ramaswami et al 2000 Schoenbachler and Gordon 2002	
Accessibility		Lin and Lu 2000 Liu and Arnett 1999 Sohn 1999	Chen and Sukpanich 1998 Kim and Lim 2001 Lee 2002 Li et al 1999	
Compatibility			Jarvenpaa and Todd 1996	Parthasarathy and Bhattacharjee 1998
Functionality		Sohn 1999		
Privacy		Pavlou 2001		Page and White 2002
Reliability			Goldsmith and Bridges 2000 Jarvenpaa and Todd 1996 Kim and Lim 2001	Lee 1999 Page and White 2002
Security		Liao and Cheung 2001 Pavlou 2001 Ranganathan and Ganapathy 2002	Chen and Sukpanich 1998 Goldsmith 2000 Han et al 2001 Kim and Lim 2001 Liang and Lai 2002 Schoenbachler and Gordon 2002	Lee 1999 Liang and Lai 2002 Page and White 2002
Network Speed			Goldsmith 2000 Goldsmith and Bridges 2000 Kim and Lim 2001 Lee and Park 2001 Rajjas and Tuunainen 2001	Lee 1999 Page and White 2002
Network Externalities				Parthasarathy and Bhattacharjee 1998
Usefulness		Bhattacharjee 2000 Chau et al 2000 Heijden et al 2001 Lin and Lu 2000 Pavlou 2001	Chau et al 2000 Chiders et al 2001 Lee, Park, and Ahn 2001	Bhattacharjee 1998 Bhattacharjee 2001a Bhattacharjee 2001b Parthasarathy and Bhattacharjee 1998
Information Quality		Lin and Lu 2000 Liu and Arnett 1999	Grandon and Ranganathan 2001 Ho and Wu 1999 Kim and Lim 2001 Wolfenbarger and Gilly 2000 Wolfenbarger and Gilly 2001 Vijayasathy and Jones 2000a	Lee 1999 Page and White 2002
	Information Complexity		Huang 2000	
	Information Novelty		Huang 2000	
	Information Architecture		Spiteri 2001	
	Information Content	Ranganathan and Ganapathy 2002		
	Information accuracy		Lee 2002	
Dynamic Pricing Strategy		Keen et al 2000	Kannan and Kopalle 2001 Liang and Lai 2002	Liang and Lai 2002
Search Attribute		Bobbitt and Dabholkar 2001 Chau et al 2000 Degeratu et al 2000	Bobbitt and Dabholkar 2001 Chau et al 2000 Grandon and Ranganathan 2001 Koufaris et al 2002 Liang and Lai 2002	Bobbitt and Dabholkar 2001 Chau et al 2000 Degeratu et al 2000 Koufaris et al 2002 Liang and Lai 2002

Online Store Environment		Eroglu et al 2000 Eroglu et al 2001 Liang and Lai 2002	Liang and Lai 2002
Shopping Aids	Vijayarathy 2001	Grandon and Ranganathan 2001 Haubl and Trifts 2000 Liang and Lai 2002 Vijayarathy and Jones 2001	Liang and Lai 2002
Channel	Liu and Arnett 1999 Vijayarathy and Jones 2000a White and Manning 1998	Bobbitt and Dabholkar 2001 Chen and Sukpanich 1998 Han et al 2001 Li et al 1999 Miyazaki and Fernandez 2001 Muthitacharoen 2000 Pereira 1998 Ramaswami et al 2000 Schoenbachler and Gordon 2002	
Medium richness		Grandon and Ranganathan 2001 Liang and Lai 2002	Liang and Lai 2002
Convenience	Vijayarathy and Jones 2000a	Andrade 2000 Chiders et al 2001 Kim and Lim 2001 Lee and Park 2001 Lee 2002 Li et al 1999 Raijas and Tuunainen 2001 Wolfenbarger and Gilly 2000 Wolfenbarger and Gilly 2001	
System Design Quality	Liu and Arnett 1999		
System Use	Liu and Arnett 1999		
Enjoyable	Liu and Arnett 1999	Chiders et al 2001 Goldsmith 2000 Kim and Lim 2001	Koufaris et al 2002 Page and White 2002
Personalized	Vijayarathy and Jones 2000a	Liang and Lai 2002	Liang and Lai 2002 Page and White 2002
Merchant and Intermediary Characteristics			
Privacy and Security Protection	Ranganathan and Ganapathy 2002	Han et al 2001 Kim and Lim 2001 Lee and Park 2001 Lee 2002 Senecal 2000	Page and White 2002
Accurate Information		Lee and Park 2001	
Brand/Reputation	Degeratu et al 2000 Heijden et al 2001 Jarvenpaa et al 1999 Jarvenpaa et al 2000 Ruyter et al 2000 Ruyter et al 2001	Lee and Park 2001 Lee 2002 Pereira 1998 Ruyter et al 2001 Schoenbachler and Gordon 2002 Ward and Lee 2000	Lee 1999
Delivery		Goldsmith and Bridges 2000 Lee 2002 Li et al 1999 Liang and Lai 2002	Lee 1999 Lee and Park 2001 Liang and Lai 2002
Multiple Payment Methods		Liang and Lai 2002	Liang and Lai 2002
Return Policies		Goldsmith and Bridges 2000 Liang and Lai 2002	Lee and Park 2001 Liang and Lai 2002
After-sales Services		Lee 2002	Lee 1999 Lee and Park 2001
Image	White and Manning 1998	Phau and Poon 2000 Jones and Vijayarathy 1998	Page and White 2002
Service Quality	Liu and Arnett 1999 Ruyter et al 2000 Sohn 1999 Song and Zahedi 2001	Vellido et al 2000	Gefen and Devine 2001
Customer Service		Kim and Lim 2001	
Relative Advantage		Siu and Cheng 2001 Kim et al 2000	
Vendor Quality	Liao and Cheung 2001	Liang and Lai 2002 Ramaswami et al 2000	Liang and Lai 2002
Incentive		Kim and Lim 2001	Bhattacharjee 2001a
Assurance		Jarvenpaa and Todd 1996 Lee 2002 Schoenbachler and Gordon 2002	Lee 1999
Empathy		Jarvenpaa and Todd 1996	
Pricing Attractiveness			Lee 1999

CONSUMER RESEARCH: In Search of Identity

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■ **Abstract** Although the consumer research field has made great progress over the past 30 years with respect to the scope, quality, and quantity of research, there are still significant disagreements about what consumer research is, what its objectives are, and how it should differ from related disciplines. As a result, the field appears to be rather fragmented and even divided on some fundamental issues. In this review we first examine the original vision for the field and its limitations. In the second section we explore the consequences of the ambiguity about the domain and identity of consumer research and the multidisciplinary influences on the field. In particular, we review key trends and “camps” in consumer research, which represent complementary and, in some cases, conflicting views regarding the main topics of investigation and how research is conducted. This review is based in part on systematic analyses of articles that have been published in the leading consumer research journals over the past 30 years. Finally, in the third section we revisit the question of what might differentiate the field from related disciplines, as well as the role of theory testing, studies of substantive phenomena, and relevance in consumer research.

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INTRODUCTION

The first chapter on “Consumer Analysis” to appear in the *Annual Review of Psychology* (Guest 1962) focused on survey techniques and other methodological aspects of consumer research, with a brief review of the hot topics of the 1950s—motivation research and subliminal advertising. The field of consumer research has made great progress since then, with a significant expansion of the range of topics studied and of the academic community of consumer researchers (for reviews, see e.g. Bettman 1986, Cohen & Chakravarti 1990, Jacoby 1976, Kassirjian 1982, Tybout & Artz 1994). The Association for Consumer Research (ACR) was founded in 1969, and the first consumer behavior textbooks and courses appeared in the late 1960s (e.g. Engel et al 1968, Kassirjian & Robertson 1968). Today, consumer researchers account for close to half of all (business school) marketing faculty, and the study of consumption is also a growing area in other disciplines, such as sociology, communication, and anthropology (e.g. Miller 1995). However, despite the rapid development of the field, there are still significant disagreements about what consumer research is, what its objectives are, and how it should differ from related disciplines. As a result, the field appears to be rather fragmented and even divided on some fundamental issues.

In this chapter, instead of following the format of providing a review of articles published in the previous 4 years, we take a broader perspective and examine the developments, the main influences, and the current state of consumer research. We also explore some of the ongoing debates regarding the identity and objectives of consumer research. Although we try to represent the different subfields and points of view, our own bias undoubtedly affects our interpretation of the developments and the alternative approaches to consumer research.

This review consists of three main sections. In the first we examine the original vision regarding the objectives of consumer research and the subjects of investigation, as well as the limitations of that research agenda. In the second section we explore the consequences of the ambiguity about the domain and identity of consumer research and the multidisciplinary influences on the field. In particular, we review the key trends and “camps” in consumer research, which represent complementary and, in some cases, conflicting views regarding the main topics

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of investigation and how research is conducted. This review is based, in part, on systematic analyses we conducted of articles that have been published in the leading consumer research journals over the past 30 years.¹ Finally, in the third section we revisit the question of what might differentiate the consumer research field from related fields, as well as the role of theory testing, studies of substantive phenomena, and relevance in consumer research.

IN THE BEGINNING: Domain-Specific Topics and Grand Theories of Consumer Behavior

Ronald Frank, the first editor of the *Journal of Consumer Research (JCR)*, expected research to be published in the journal to encompass such topics as family planning behavior, occupational choices, mobility, determinants of fertility rates, attitudes towards and use of social services, and determinants of educational attainment (Frank 1974, p. i). Although this is not representative of the types of consumer research conducted at that time (see e.g. Bettman 1971, Jacoby et al 1974, Monroe 1973, Wright 1973), one is struck by the emphasis on topics that are specific to particular consumption categories, such as occupations and social services, and the omission of more general issues, such as persuasion and choice. An apparent assumption underlying this vision for *JCR* was that consumer researchers and researchers from related disciplines would primarily adapt, apply, and possibly extend theories developed in the basic disciplines, such as psychology, sociology, economics, and communication, to specific consumption categories.

It is noteworthy that the most influential frameworks in the early days of the consumer research field were comprehensive models of buyer behavior (e.g. Engel et al 1968, Howard & Sheth 1969, Nicosia 1966). The implicit assumption was that buyer behavior can be captured in one comprehensive model or “grand theory.” The emphasis on comprehensive models of buyer behavior declined significantly during the 1980s, which appears to be a natural progression for the field. First, consumer behavior is too complex to be meaningfully captured in a single model. After all, consumer psychology involves most of the elements of human psychology, which cannot be meaningfully represented in any single model or theory. Second, although comprehensive models of buyer behavior served a purpose in integrating various components and, in some ways, defining the field, they could not be effectively tested, and the significance of the actual insights they provided may be debatable.

These models, as well as Frank’s (1974) vision for *JCR*, did not resolve the question of what differentiates the consumer research field. In particular, whereas studying topics such as attitudes towards educational services and contraceptives might be relevant and useful for those interested in these subjects, many researchers

¹Given space limitations, we report only the main findings from these analyses. Additional information regarding the method of analysis and findings can be obtained from the authors.

are likely to perceive as more important and interesting, more general issues, such as how attitudes are formed and choices made. However, focusing on more generic questions raises other “problems” relating to the unique identity and role of consumer research. As described in the next section, owing to this ambiguity and the overlap with more established fields, consumer research has been shaped to a large degree by developments and sometimes conflicting criteria and methods of related disciplines.

MULTIDISCIPLINARY INFLUENCES ON TRENDS AND CAMPS IN CONSUMER RESEARCH

In this section we examine the current state of consumer research, focusing on the multidisciplinary influences on the field with respect to both topics of investigation and research methods. In particular:

1. Because most key aspects of buyer behavior are also central research topics in other disciplines, especially psychology, one would expect developments in consumer research to reflect approaches and developments in the related disciplines. In this review we examine the trends in consumer research with respect to (a) the share of “social” versus “cognitive” topics and (b) the share of research on “cold” (e.g. attitudes, multi-attribute models, decision rules) versus “hot” (e.g. emotions, arousal, conflict) aspects of consumer behavior.
2. Although psychology has had the greatest impact on consumer research, other fields, such as economics and anthropology, have also had significant influences. Many consumer researchers have tended to be associated with particular other disciplines, representing alternative approaches to research. Consequently, consumer research camps have correspondingly differed in their views regarding important research questions and acceptable research methods. In this review we examine two distinctions within the consumer research field that can be traced to multidisciplinary influences: (a) behavioral decision theory (BDT) compared with social cognition consumer research and (b) postmodern (or interpretive) compared to positivist consumer research (including both social cognition and BDT research).
3. To further explore the changes in disciplinary impact on consumer research, we analyze the trend in the share of articles representing applications of theories developed in other fields compared with work involving original theory development and/or identification of new phenomena and explanations.

The Correspondence Between Trends in Psychology and Consumer Research: Social Versus Cognitive and “Hot” Versus “Cold” Topics

Social Versus Cognitive Consumer Research Unlike researchers in psychology, consumer researchers are not identified as social or cognitive, and many researchers in the field have examined issues in both domains. However, following the common distinction in psychology between the social and cognitive domains and the increasing importance and sophistication of research on cognition, it is of interest to study whether there has been a corresponding increase in the share of cognitive relative to social topics studied by consumer researchers. To explore this question, two independent judges (doctoral students working in the area of consumer behavior) classified all consumer behavior articles that have appeared in the leading consumer research journals (*JCR* 1974–1999, *Journal of Marketing Research* 1969–1999, and *Journal of Consumer Psychology* 1990–1999) based on whether they dealt with issues that fall in the domain of social or cognitive psychology.

The exact results of this analysis depend on the manner in which articles in the general area of social cognition (e.g. attitude, persuasion, information processing), which is central to consumer research, are classified. However, regardless of whether social cognition topics are classified as social or cognitive, the qualitative conclusion made from this analysis is that the proportion of social topics has declined significantly, whereas the proportion of cognitive topics has correspondingly increased. Social areas of consumer research that have declined in importance include such topics as family and social influences, reference groups, attribution, and self-perception (e.g. Bearden & Etzel 1982; Folkes 1984, Scott & Yalch 1980). Some of the cognitive topics that have increased in importance include behavioral decision making (see Bettman et al 1998 for a review), memory and knowledge (e.g. Alba & Hutchinson 1987), language (e.g. Schmitt & Zhang 1998), variety seeking (e.g. McAlister 1982, Ratner et al 1999, Simonson 1990), and preconscious processing (e.g. Janiszewski 1988). It is noteworthy that some social topics have become more central, such as cross-cultural and ethnic influences on buyer behavior (e.g. Deshpande & Stayman 1994), the development of children as consumers (e.g. Gregan-Paxton & Roedder-John 1997), and gender differences (e.g. Meyers-Levy & Maheswaran 1991).

A major change has been the decline of attitudes as the central topic of research. In particular, the Fishbein & Ajzen (1975) multi-attribute attitude model and theory of reasoned action received a great deal of attention from consumer researchers in the 1970s and early 1980s, examining such questions as whether intentions mediate the effect of attitudes on behavior and the role of the normative component in the formation of attitudes (e.g. Lutz 1977, Miniard & Cohen 1983, Shimp & Kavas 1984; see also Bagozzi et al 1992).

Since the early 1980s, the elaboration likelihood model of Petty and Cacioppo (e.g. Petty et al 1983) and related dual process models (Chaiken 1980, Fiske &

Pavelchek 1986) have been accepted by most consumer researchers as the approach that can best account for the diverse findings on the formation of attitudes, persuasion, and related information processing issues (e.g. Aaker & Maheswaran 1997, Sujan 1985). In addition, consumer researchers have started to examine persuasion processes that relate specifically to marketing and were not derived from existing psychological theories, such as the persuasion knowledge model (Friestad & Wright 1994).

Another important development, which likely contributed to the decrease in the proportion of attitude and persuasion research, has been the growing interest in consumer decision making and the rise of BDT consumer research. In particular, Bettman's (1979) influential book, *An Information Processing Theory of Consumer Choice*, inspired by the work of Newell & Simon (1972), Payne (1976), and other decision-making researchers, presented a framework that describes how information inputs are processed to achieve a decision. It emphasized the role of short- and long-term memory, decision rules and heuristics, and other issues that have subsequently received much attention from consumer researchers.

Finally, memory and cognitive elaboration is another cognitive area that has received growing attention from consumer researchers, including the use of principles of memory operation to explain persuasive communication effects (e.g. Johar & Pham 1999, Keller 1987). For example, according to the resource-matching hypothesis (Norman & Borrow 1975; see Anand & Sternthal 1990 for a review), persuasion is enhanced or hindered depending on the match between the level of cognitive resources available for message processing and the level of cognitive resources that the message requires (e.g. Meyers-Levy & Tybout 1997, Unnava et al 1996).

Research on "Hot" Versus "Cold" Aspects of Consumer Behavior A great deal of attitude and decision-making research has examined what might be considered "cold" aspects of consumer behavior. "Cold" aspects include such topics as the role of beliefs in attitude formation, attention, perception, information acquisition, learning, expertise, attribution, and decision rules. Conversely, "hot" aspects include such topics as the role of affect and mood, arousal, regret, low-involvement peripheral persuasion, hedonic aspects of consumption, conflict, and self-expressive motives for brand preference. In psychology there has been growing emphasis on the role of emotions and other "hot" aspects of cognition (see, e.g. Zajonc 1998).

We examined the proportion over time of "cold" and "hot" topics in consumer research based on a classification of articles that have been published in the leading consumer research journals (*JCR* 1974–1999, *Journal of Marketing Research* 1969–1999, and *Journal of Consumer Psychology* 1990–1999). Counting only articles that the judges coded as "cold" or "hot" (excluding the "other" category), there has been a decline in the relative proportion of "cold" topic articles from about 85% in the 1970s, to 75% in the 1980s, and 64% in the 1990s. For example, until recently decision-making research was clearly a

“cold” domain, perhaps reflecting the cold economic benchmark often used by decision researchers. However, BDT consumer researchers have recently started to study the role of emotions in decision making (e.g. Bettman 1993). For example, Luce (1998) examined the effect of emotional tradeoff difficulty on the type and amount of information processing (see also Pham 1998, Shiv & Fedorikhin 1999). Other “hot” topics include, for example, affective responses to advertising (e.g. Baumgartner et al 1997, Edell & Chapman-Burke 1987), consumers’ fun and fantasies (Holbrook & Hirschman 1982), and measures of consumption emotions (Richins 1997).

In summary, a review of articles published in the leading consumer research journals reveals two trends, both reflecting similar trends in psychology. There has been a decline in the proportion of classic social topics and an increase in the proportion of cognitive topics. Further, the proportion of “hot” topics has increased relative to “cold” topics, though the latter category still accounts for the majority of consumer research articles.

Disciplinary Influence and Alternative Orientations in Consumer Research: Behavioral Decision Theory Versus Social Cognition and Positivist Versus Postmodern

As indicated, consumer researchers who have been influenced by particular fields have tended to work on different topics and employ different research methods. In this section we explore two contrasts: (a) BDT versus social cognition consumer research and (b) positivist versus postmodern consumer research.

The Behavioral Decision Theory and Social-Cognition Approaches to Consumer Research Whereas the distinction between social and cognitive research does not play nearly as significant a role in consumer research as it does in psychology, the somewhat loose distinction between social cognition-based research and so-called BDT is more prominent in consumer research. In psychology, BDT accounts for a relatively small segment of the literature, although leading BDT researchers such as Daniel Kahneman and Amos Tversky have had great impact on both the cognitive and social psychological literatures. In the consumer behavior literature, research that follows the BDT research paradigm has accounted for a large and growing proportion of all nonpostmodern articles published in the leading journals. Indeed, the central BDT issues of judgment and choice are directly relevant to the most researched area in marketing and consumer behavior, namely, influences on purchase decisions. Furthermore, BDT research serves as a bridge between the “behavioral” and “quantitative” sides of marketing because both BDT and quantitative research share the link to economics and the focus on consumer choice. Conversely, quantitative research in marketing tends to have less in common with social cognition consumer research (and even less with postmodern research).

First, it should be emphasized that social cognition and BDT researchers in marketing share many of the same research values and methods. For example,

in the debate between the positivist and postmodern approaches to research, both social cognition and BDT researchers, by and large, are on the same (positivist) side. Furthermore, there are differences in emphasis among researchers within the consumer BDT and social cognition subfields, making it difficult to generalize regarding differences between the two camps. In particular, much BDT consumer research has investigated the processes underlying judgments and decisions (e.g. Coupey 1994, Dhar & Nowlis 1999, Sen & Johnson 1997). Conversely, other BDT research has focused more on judgment and decision-making phenomena, such as the manner in which consumers integrate the opinions of multiple critics (e.g. West & Broniarczyk 1998) or the impact of anticipating regret (e.g. Simonson 1992), where process measures are either not used at all or provide additional insights but are not the focus of the research. Similarly, there are large differences among social cognition consumer researchers with respect to both research methods and topics (see, e.g. Kisielius & Sternthal 1984 and Tybout et al 1983, compared with Alba et al 1999 and Lynch et al 1988).

With the caveat that there are exceptions to each of the following generalizations, there are several key differences between BDT and social cognition consumer research:

1. One obvious difference relates to the primary influences on each area. Social cognition consumer research has been influenced primarily by social cognition research in psychology (e.g. Chaiken 1980, Fiske & Taylor 1984). Conversely, the primary influence on BDT consumer research has been the BDT literature, including the work of Kahneman & Tversky (e.g. 1979), Thaler (1985), and other researchers. Furthermore, similar to BDT research published in nonmarketing journals, BDT consumer research has tended to use the normative benchmark of value maximization and time-consistent preferences for evaluating the significance of research findings. Thus, findings that demonstrate violations of the classical economic assumptions regarding buyer behavior have typically been regarded as interesting and important. For example, BDT consumer researchers have demonstrated that, (a) the framing of product attributes (e.g. ground beef that is "80% lean" or has "20% fat") influences product evaluation even after actual experience ("80% lean beef" tasted better than "20% fat beef;" Gaeth & Levin 1988); (b) when costs significantly precede benefits, the sunk cost effect is greatly diminished (Gourville & Soman 1998); (c) the interaction between the pleasure of consumption and the pain of paying has predictable impact on consumer behavior and hedonics (Prelec & Loewenstein 1998); and (d) preference elicitation tasks involving comparison of options (e.g. choice), judgments of individual options (e.g. ratings), and matching of two options varying in price and quality, produce systematically different preferences (e.g. Carmon & Simonson 1998, Hsee & Leclerc 1998, Nowlis & Simonson 1997). In recent years, the focus has shifted from demonstrations of value maximization violations

to studies that are designed to gain a better understanding of the factors that influence the construction of preferences (e.g. Drolet et al 2000; for a review, see Bettman et al 1998).

2. Social cognition and BDT consumer research have tended to build on different underlying models of buyer behavior and the communication process. One often referenced response hierarchy model (e.g. McGuire 1969), which has its origin in the communications area, includes the following stages: exposure/attention → reception/encoding → cognitive response → attitude → intention → behavior. The other model, which focuses on consumer decision making (or buying process), includes the following stages (e.g. Peter & Olson 1993): problem recognition → information search → evaluation of alternatives → purchase decision/choice → postpurchase evaluation. Although these two models highlight somewhat different elements in the consumer response and decision-making process (e.g. attention and intention versus search and evaluation) and employ different terminology, the essential components are quite similar. Thus, for example, most studies that examine influences on attitudes and attitude change also effectively investigate the formation of preferences and alternative evaluation, and vice versa (e.g. Morwitz et al 1993). However, whereas social cognition consumer research has focused on the stages in the communications (or hierarchy-of-effects) model and on how judgments and attitudes are formed, BDT consumer research has tended to examine the decision-making model and particularly the determinants of choice.
3. Related to item 2, whereas BDT consumer researchers have studied primarily stimulus-based phenomena (e.g. Dhar 1997, Kahn & Louie 1990), social cognition research has focused more on memory-based tasks (e.g. Alba et al 1991; Biehal & Chakravarti 1982, 1983). For example, building on the influential accessibility-diagnostics model of Feldman & Lynch (1988), Lynch et al (1988) proposed that decisions arise from a process whereby inputs are sequentially retrieved from memory, with the consumer updating the implications of already considered evidence with each new input retrieved. The order of retrieval is a function of the accessibility of each input, but accessible information can be actively disregarded if it is perceived to be nondiagnostic.
4. Although there are certainly exceptions to this generalization, BDT research has tended to focus more on substantive phenomena, which are explained based on existing theories or lead to theoretical extensions. Conversely, a greater share of social cognition consumer research has involved theory testing and extensions that have implications for the consumer environment (e.g. Ratneshwar & Chaiken 1991).
5. There are also differences in the process measures that social cognition and BDT consumer researchers tend to use. Social cognition researchers often

employ measures such as cognitive response (e.g. Sternthal et al 1978) and recall to gain insights into cognitive processes. In the BDT area, researchers who have used process measures tended to rely primarily on measures of information acquisition, verbal protocols, and response time (e.g. Bettman & Park 1980, Brucks 1988, Johnson 1984, Sen & Johnson 1997). There is no obvious explanation for the different process measures employed. Finally, the use of mediation and path analysis is more common in social cognition than in BDT consumer research.

Despite the differences between the social cognition and BDT approaches to consumer research, the main topics of investigation are closely related and the research methods, by and large, are similar. Thus, decreasing the division between the two areas and increasing communication and collaboration can advance the consumer research field. Consider, for example, the currently dominant view of consumer persuasion based on the elaboration likelihood model (e.g. Petty et al 1983). Briefly, evaluation of arguments presented in an ad is a frequent example of processing through the central route, whereas the impact of background music represents an example of persuasion through the peripheral route. However, depending on the motivation and ability to process the information, the same cue (e.g. the product endorser) might influence persuasion through either the central or peripheral route (e.g. Petty et al 1991).

In the BDT literature researchers have made a related distinction between compensatory and heuristic-based decision rules (see, e.g. Bettman 1979). This distinction, however, refers typically to the manner in which consumers process attribute information, as opposed to different types of information. Interestingly, BDT researchers have not paid much attention to the manner in which typical peripheral cues, such as source characteristics and background music, impact consumer preferences. On the other hand, BDT consumer researchers have studied extensively the impact of various contextual factors, such as task characteristics (e.g. Fischer et al 1999) and the configuration of the option set under consideration (e.g. Huber et al 1982, Huber & Puto 1983, Wernerfelt 1995), on consumer preferences. These contextual moderators have not received much attention in social cognition research on attitude and persuasion, even though such factors appear quite relevant to our understanding of attitude and persuasion.

Another area that could potentially benefit from increased integration of BDT and social cognition research involves the BDT notion of construction of preferences and the related concepts in social cognition of attitude accessibility and diagnosticity (e.g. Fazio et al 1989, Feldman & Lynch 1988), as well as the notions of attitude strength and ambivalence (e.g. Priester & Petty 1996). For example, Krosnick & Shuman (1988) showed that, contrary to common assumptions, measured attitudes of individuals whose attitudes are intense, important, and held with certainty, are just as susceptible to response order effects as other respondents'. A related finding from BDT consumer research is that expertise and involvement (e.g. owing to accountability) often do not diminish and, in some cases, enhance

the susceptibility of consumers to judgment and decision errors such as overconfidence and the attraction effect (e.g. Mahajan 1992, Simonson 1989; but see Coupey et al 1998). Thus, by integrating findings from the social cognition and BDT areas, we are likely to gain a better understanding of the moderators of consumer susceptibility to various biases.

Another example of a finding in social cognition research that might have significant BDT implications is the observation that stronger, more accessible attitudes diminish sensitivity to changes in the attitude object (Fazio et al 2000). In particular, it suggests that, although well-formed, stable preferences might represent the ideal sovereign consumer, it might actually reduce consumer welfare and choice effectiveness. Finally, social cognition research on the measurement and construction of attitudes (e.g. Menon et al 1995; for a review, see Schwarz & Bohner 2000) can have significant implications for decision research, and vice versa. In sum, despite the differences in research traditions, issues, and methods, we believe there is a need and opportunity for greater interaction and collaboration between social cognition and BDT consumer researchers.

Postmodern and Positivist Consumer Research So-called postmodern consumer research emerged in the 1980s (see also Levy 1959) and offered an alternative perspective to the purpose of consumer research, the important topics of investigation, and the research methods. An analysis of articles published between 1980 and 1999 in the major journal in the field, *JCR*, reveals that the proportion of postmodern research increased during the 1980s and represented approximately 20% of the published articles since 1990 (with the majority of the remaining articles representing positivist research). Briefly, whereas positivist research attempts to uncover cause-and-effect relationships and focuses on explanations, the postmodern approach focuses more on interpretation than causation and believes in a more subjective view of data interpretation (for a contrast of the two approaches, see Hudson & Ozanne 1988).

Postmodern researchers have also emphasized the need to distinguish consumer research from other fields and to avoid using managerial relevance as a criterion for evaluating research. For example, Belk (1986, p. 423) writes, "My own vision is one of consumer behavior as a discipline unto itself, with a variety of constituent groups, but with no overriding loyalty to any existing discipline or interest group. That is, consumer behavior should not be a subdiscipline of marketing, advertising, psychology, sociology, or anthropology, nor the handmaiden of business, government, or consumers. It should instead be a viable field of study, just as these other disciplines are, with some potential relevance to each of these constituent groups." Holbrook (1987, p. 128) proposes that consumer research refers to the "study of consummation in all its many aspects." Indeed, whereas most positivist research has focused on issues related to purchase decisions, a main emphasis in postmodern consumer research has been on specific consumption experiences and aspects of consumer behavior that had not previously been considered important areas for consumer research. For example, Belk & Costa (1998) recently published

a paper regarding the mountain man myth, Thompson (1996) studied the juggling lifestyles of mothers, Arnould & Price (1993) studied the experience of river rafting, and Holbrook & Grayson (1986) provided a semiotic perspective of the movie *Out of Africa*. Also, in his 1998 presidential address to the Association of Consumer Research, John Sherry argued that traditional prose articles might be insufficient vessels for our understanding of consumer behavior and that other vehicles, such as poetry, can more effectively capture the subjective experience of inquiries about consumer behavior.

It should be noted that, in addition to what many positivist researchers regard as unusual topics, some postmodern consumer researchers have examined mainstream topics, such as customer satisfaction (Fournier & Mick 1999). However, by and large, postmodern researchers have introduced both new methods and new kinds of topics, inspired by research in anthropology, literature, and other fields that had previously had limited impact on consumer research. Similar to postmodern researchers in other disciplines such as anthropology, postmodern consumer researchers have employed different methodologies, including existential phenomenology (e.g. O'Guinn & Faber 1989, Thompson et al 1989), hermeneutics (Arnould & Fischer 1994), participant observation (Schouten & McAlexander 1995), in-depth interviews (Hirschman 1994), ethnography (Arnould & Wallendorf 1994), critical theory (Murray & Ozanne 1991), literary criticism (Stern 1989), and introspection (Gould 1991; but see Wallendorf & Brucks 1993).

The combination of what was perceived as a different kind of science, which deviates from traditional methods of analyzing and interpreting data, with what was perceived as unusual topics, has evoked strong opposition from many positivist researchers. For example, Cohen (1989) criticizes Belk's research on the role of consumer possessions (1988), arguing that it lacks meaning, empirical identification, and explanatory power. On the other hand, Firat & Venkatesh (1995, p. 260) appeal to positivist researchers to be more receptive to alternative paradigms, stating, "We therefore ask the consumer researchers who are steeped in the methods of cognitive psychology to come out of their protective shells, to set themselves free from unidimensional conceptions. ...It means that we must opt for multiple theories of consumer behavior rather than a single theory that silences all other theories."

At this stage, after the positions of proponents of the two convictions have been expressed in different forums, there is rather limited ongoing communication between them. Looking ahead, it is reasonable to expect that the intensity of the postmodern-positivist debate will diminish. Furthermore, because current marketing doctoral students in some schools are exposed to both positivist and postmodern professors, they are likely to be more receptive to both approaches. Most importantly, despite the current differences in methodology and topics, there are significant opportunities for collaboration. McQuarrie & Mick (1992) provided a fine example of the virtues of combining semiotics analysis and experiments in their research on advertising resonance. Indeed, with more openness and tolerance on both sides, there is significant room for collaboration and combining the advantages of both approaches. Although many positivist researchers are unlikely to

change their views regarding data collection and analysis, the limitations of the traditional experimental methodologies and measures may enhance their willingness to combine quantitative data with less structured, more qualitative methods. Also, although positivist and postmodern consumer researchers have so far focused on different kinds of topics, as indicated, the methods employed by postmodern researchers could also be applied to more traditional topics, such as decision making, persuasion, regret, and affect.

Types of Consumer Research: Theory Development Versus Theory Application

Consumer research can be classified along a continuum from basic research, involving new theories, concepts, and explanations, to applications and minor extensions of existing theories and concepts. One might expect that in the early development of a new applied field such as consumer research there would be greater emphasis on applications of existing theories and borrowing from other, more established fields. However, over time, consumer researchers may seek to go beyond mere applications and minor theoretical extensions and introduce significant theoretical extensions and concepts, and in some cases, new theories relating to buyer behavior.

To examine this question more systematically, two independent judges (doctoral students specializing in consumer behavior) coded consumer research articles (not including postmodern articles) that have appeared in the August issues of the *Journal of Marketing Research* between 1969 and 1999 and articles that appeared in the September issues of the *JCR* between 1974 (the journal's first year) and 1999. Specifically, the judges coded articles dealing with consumer behavior on 1–4 scale, where 1 represents applications or minor extensions of established theories and phenomena (e.g. an investigation of a particular moderator or boundary condition, or ruling out an alternative explanation), and 4 represents articles introducing new constructs, theories, and/or phenomena.

The results show a significant time trend (correlation = 0.15), with the linear regression model yielding a significant coefficient for year as a predictor ($p < 0.005$). Specifically, looking at 5-year periods from 1969 through 1998, the proportion of articles coded as applications of existing theories and minor extensions (i.e. articles coded 1 or 2 on the 1–4 scale) declined continuously, from 94% in 1969–1973 to 66% in 1994–1998. This trend is consistent with the notion that, as the field has evolved, the appreciation for research that merely applies theories developed elsewhere has declined. Although the consumer environment places some interesting constraints, and demonstrations that certain theories have implications for consumers and marketers can be important, such research is increasingly regarded as making limited (conceptual) contributions and not worthy of publication in the leading journals. Indeed, to the extent that the consumer environment is just another instance of the relevant constructs, there is no conceptual reason to expect the theories not to apply.

We also examined whether there has been a trend with respect to research topics that examine issues that are specific to and relevant primarily to consumer research

and marketing as opposed to topics of general interest that might have been published in psychology and other basic discipline journals. For example, whereas the topic of brand equity and extension is central to marketing (e.g. Aaker 1997, Aaker & Keller 1990, Broniarczyk & Alba 1994, Fournier 1998, Keller 1993, Gardner & Levy 1955, Park et al 1991), it has limited significance to other fields. Excluding postmodern articles from the analysis, there has not been a significant change on that dimension; during 1969–1973, 67% of the articles were classified as consumer/marketing specific (1 or 2 on the 1–4 scale), and since 1973 the two topic categories (consumer-specific versus general) have accounted for approximately the same share of consumer research articles.

In summary, our review of the state of consumer research and developments in the field over the past 30 years points to several key trends. First, research topics continue to be influenced by trends in other disciplines, especially psychology. Second, related to the multidisciplinary impact, the consumer research field is characterized by significant divisions between subareas, which not only tend to study different topics, but also differ in terms of their research orientation and methods. Finally, our analysis points to a growing emphasis on original topics and theories compared with applications of existing theories adopted from other fields.

IN SEARCH OF IDENTITY: The Role of Relevance, Theory Testing, and Substantive Phenomena

As the preceding review of developments in consumer research and multidisciplinary influence on the field suggests, despite the progress in terms of the quality and quantity of published articles, some of the fundamental debates regarding the objectives and the appropriate topics and methods have not been resolved. The view that consumer research “seeks to produce knowledge about consumer behavior” (Calder & Tybout 1987, p. 136) implies that the important consumer research topics are also main topics in other disciplines, creating ambiguity as to what distinguishes consumer research (other than being a “one-stop shop” for studies of relevance to consumer behavior). Another “constraint” that significantly affects the priorities of many consumer researchers is the fact that most of them are marketing professors in schools of business and might have (explicit and/or implicit) incentives to focus on research topics that are potentially relevant to managers and, to a lesser degree, other constituencies. In this concluding section we examine the different perspectives on the role of relevance and the emphasis on theory-testing versus substantive phenomena-driven research (which leads to theory development), as well as the implications of these approaches for the purpose and identity of the consumer research field.

The Objectives and (Ir)Relevance of Consumer Research One would expect any research field or discipline to have a unique identity and purpose that separate it from other fields. Earlier we cited the vision of the first editor of the *JCR*, Ronald Frank (1974), regarding the domain-specific aspects of consumer behavior that he expected researchers from multiple disciplines to examine. At about

the same time, the Association for Consumer Research (ACR) was founded with the goal of providing “a forum for exchange of ideas among those interested in consumer behavior research in academic disciplines, in government at all levels from local through national, in private business, and in other sectors such as non-profit organizations and foundations” (Pratt 1974, p. 4). In 1993, Wells argued that the original vision for the consumer research field has faded and the discipline “faces inward, toward a narrower range of issues, and away from the real world.”

Whether or not one shares this assessment of the state of the field, it appears that the original vision regarding the direction and objectives of the ACR and *JCR* has not materialized. With relatively few exceptions, *JCR* and the ACR have not become forums in which researchers from multiple fields exchange ideas about consumer behavior. Also, although some articles published in *JCR* and other journals have examined specific consumer issues, such as food and energy consumption and the provision of nutrition information (e.g. Reilly & Wallendorf 1987, Ritchie et al 1981, Russo et al 1986), most articles published in the leading journals have examined more generic topics such as choice and attitudes. Thus, it is sometimes unclear what differentiates consumer research from other disciplines, except for the experimental stimuli used (e.g. choice between cars versus choice between bets) and the research positioning.

It is also noteworthy that consumer research has not differed significantly from psychology with respect to the proportion of laboratory studies and the use of student subjects. Specifically, our analysis of articles published in the leading consumer research journals² indicates that (a) the proportion of laboratory studies (defined as studies in which participants were aware that they were participating in a study) climbed from about 80% to around 90% in the mid-1970s and has stayed at that level ever since and (b) whereas the proportion of studies using student subjects was only about 30% until the early 1980s, the use of student subjects has increased steadily since then, representing approximately 75% of (positivist) studies published during the 1995–1999 period (see McGrath & Brinberg 1983, Calder et al 1981, and Lynch 1982 for a discussion of the virtues of using homogeneous subject populations such as students).

A related question regarding the role and identity of consumer research is the issue of relevance (see Shimp 1994 for a comprehensive and insightful discussion of this question). Should consumer research be relevant and useful in a concrete way to particular constituencies, or should consumer research produce general knowledge about consumer behavior that could potentially be relevant to various constituencies? Shimp argues that, although consumer research may not be directly relevant to managers and other particular constituencies (other than fellow academics), the knowledge produced by consumer researchers is eventually diffused through teaching, books, consulting, and other channels.

²This analysis is based on an examination of consumer behavior articles published in the August issues of the *Journal of Marketing Research* between 1969 and 1999, and articles published in the September issues of the *JCR* from 1974 till 1999.

The (ir)relevance of consumer research to managers has received particular attention, and as business schools become more sensitive and responsive to criticism of companies, students, and the popular media, this issue has gained prominence. Although there is continuing disagreement among consumer researchers regarding the virtues of being relevant to managers (e.g. Holbrook 1985), there appears to be general consensus that (academic) consumer research has had rather limited actual impact on managerial practice [(e.g. Lutz 1991, Wells 1993; an exception to this generalization is some of the studies dealing with new research methodologies [e.g. Green & Srinivasan 1978])]. Interestingly, consumer research articles increasingly emphasize the managerial implications of the findings, and in some journals, having specific managerial implications is one of the conditions for publication. Yet, few managers (or consumers) read consumer research articles that are published in the major journals, and the issues investigated are typically not at a level that is of much use for them.

Also, the proportion of articles published in the major marketing journals that have public policy implications declined in the 1990s compared with the 1970s and 1980s (though this trend might be explained in part by the introduction of the *Journal of Public Policy & Marketing*). Our analysis³ indicates that, during the second half of the 1970s through the 1980s, approximately 20% of the consumer research articles published in major consumer research journals included public policy implications (e.g. Andreasen 1985, Beales et al 1981), but the proportion of public policy–relevant articles declined to approximately 3% in the 1990s (e.g. Block & Anand-Keller 1995, Pechmann & Ratneshwar 1994).

This situation, whereby a field of research has limited concrete relevance or immediate impact on particular constituencies, is certainly not unique to consumer research. Furthermore, it is easy to identify reasons for the limited relevance of consumer research, including (a) the emphasis on theoretical contribution, rigor, and statistical (rather than practical) significance tends to limit the practical relevance; (b) the research, review, and publication process typically takes several years; (c) unlike researchers in other departments (e.g. medical researchers), who depend on external funding, many consumer researchers require limited funds, and these funds are typically provided by the business schools; (d) the gatekeepers of the leading consumer research journals are almost exclusively academics (for example, in 1999, 88 of the 90 members of the *JCR* Editorial Board were university professors); and (e) many consumer researchers have limited institutional knowledge and may be removed from the concerns and problems faced by managers, public policy makers, and even consumers (e.g. Armstrong 1991, Hoch 1988).

³Two independent coders rated each consumer research article published in August issues of the *Journal of Marketing Research* (since 1969), September issues of the *JCR* (since 1974), and Summer issues of the *Journal of Consumer Psychology* (since 1991) in terms of the relevance of its findings and conclusions to public policy makers. The coders used a 0–3 scale where 0 = not at all relevant and 3 = very relevant.

Theory-Testing Versus Substantive Phenomena-Driven Consumer Research

Calder & Tybout (1999; see also Calder et al 1981) distinguish between (a) theory testing, which involves testing of explanations and relations among underlying constructs as well as “intervention testing” (i.e. theory applications) and (b) effect applications, in which the research question is whether previously observed effects derived from a particular theory extend to specific other settings. In the former a study is designed to provide the strongest test of the theory, with an emphasis on internal rather than external validity, whereas the latter requires that the experimental design represents most accurately the settings of interest. Importantly, both types of research are driven by existing theories—either theory testing or applications and extensions of theories to particular settings. The argument for emphasizing research that is designed to test and apply theories is that it generates universal principles that “explain any real-world situation within their domain” (Calder et al 1981). From that perspective, theoretical explanations are the most important product of research, whereas generalized empirical phenomena have a lower status and are primarily designed to test and potentially falsify the theory. However, the starting point and motivation for a research project might be either theory testing or a study of a particular substantive (or methodological) domain that yields a set of observations (see discussion of the validity network schema [McGrath & Brinberg 1983, Brinberg & McGrath 1985]). Such empirical observations are typically interpreted based on existing theories, and they often suggest extensions or modifications of existing theories.

Although both theory tests and research that begins with substantive issues and phenomena can contribute to theory building, there are important differences between them. First, with the latter approach, the substantive phenomena investigated are considered interesting in their own right, as opposed to being merely arenas for theory testing. For example, understanding whether and under what conditions consumers discount missing attribute values (e.g. Meyer 1981), draw spontaneous inferences when processing ads (e.g. Kardes 1988), tend to confirm hypotheses generated by ads (e.g. Deighton 1984, Hoch & Ha 1986), prefer pioneering brands (e.g. Carpenter & Nakamoto 1989, Kardes et al 1993), and prefer to co-consume items (e.g. a tasty, unhealthy appetizer and a healthier, less tasty entree) that “balance” each other (e.g. Dhar & Simonson 1999) are research-worthy questions in their own right. The findings of such investigations, in turn, often contribute to theory development.

A second implication of substantive issue-driven research is that identifying generalized empirical phenomena is an important step in the research process. For example, Huber et al (1982) made an interesting observation whereby the addition of an asymmetrically dominated option to a two-option set increases the (absolute) choice share of the dominating option, in violation of the economic assumption of value maximization. Although Huber et al offered several possible explanations, there was no clear theoretical account for this phenomenon when the article was published. However, this finding generated a great deal of interest, leading subsequently to the development of theoretical accounts for such “context

effects” (e.g. Ariely & Wallsten 1995, Simonson & Tversky 1992). In that respect, consumer researchers can learn from the “quantitative” researchers in marketing, who often begin with an examination of relevant empirical phenomena, leading to empirical generalizations and theory building (Bass & Wind 1995).⁴

Relatedly, Alba (1999) suggested that less emphasis on theory tests and greater emphasis on obtaining data points would help advance the consumer research field. He writes, “Despite its multidisciplinary positioning, consumer research has been influenced by a narrow set of scientific traditions. A characteristic trait of these traditions is an emphasis on ‘theory,’ which is loosely conceived but frequently embodied in structural models or process explanations of empirical phenomena. ...The irony for consumer research, however, is that it places premium on theory when in reality it is starved for reliable data points.” This point of view is consistent with the approach employed, for example, in medical research, where robust effects are regarded as interesting and important in and of themselves, with the theory often developed at a later time.

This does not mean that theory testing is not an important priority for consumer researchers (e.g. Petty & Cacioppo 1996). Indeed, theories such as the elaboration likelihood model (e.g. Petty et al 1983) and prospect theory (Kahneman & Tversky 1979) have had tremendous impact on the field. However, a question that arises is whether the dominant emphasis on theory-tests as opposed to substantive domain-driven consumer research has indeed enhanced the contribution and the impact of consumer research on its various constituencies. Lutz (1991) argued that the likelihood that theory-tests will yield insights into substantive phenomena of interest is quite remote and that the most likely yield is with respect to the theory being tested. He further proposed that one way to ensure better representation of the substantive domain is to conduct research in naturally occurring consumer purchase, consumption, and communications situations (see also Winer 1999). This argument is related to the debate in the consumer research literature regarding the proper role and significance of external validity in theory tests (e.g. Calder et al 1981, Lynch 1982). Consistent with Lutz’s position, if in addition to theory testing, the goal of a research program is to gain a better understanding of particular substantive phenomena and the boundaries of relevant theories, then inclusion of field studies, even if they require some compromise with respect to internal validity, becomes important. As Taylor argued (1998, p. 84), “... to the extent that any program of research must ultimately address both what can happen and what does happen, making use of laboratory experiments to the exclusion of parallel field studies is unwise. Moreover, field studies ... provide valuable insights into the

⁴A possible limitation of substantive domain-driven research is that there are no clear criteria for determining which questions are interesting and worthy of research, whereas theory tests might offer clearer guidelines. However, the research community, in general, and journal reviewers, in particular, can help educate researchers as to the types of substantive issues considered interesting.

natural contexts in which phenomena occur; they provide information about the strength of the phenomena, given correlated environmental circumstances; they may be helpful in elucidating mediation; and they are extremely important for identifying variables both internal to the person and the environmental nature that moderate the phenomenon.”

Similarly, Shimp (1994; see also Lehmann 1996) proposed that consumer research needs to put far greater emphasis on “consumer behavior that occurs within the milieu of actual marketplace phenomena.” He suggested that theories taken from other disciplines should be used as instruments rather than as the primary objectives of empirical inquiry. The ultimate goal, he argues, is “the development of theory about actual consumer behavior that may serve the needs of all markets interested in consumer research: academics, students, businesspeople, public policy officials, and society at large”(p. 5).

CONCLUSION

We have examined the current state of consumer research, the multidisciplinary influences on the field and their consequences, as well as the question of what differentiates it from other fields. Multiple influences on an applied area and an identity problem are probably not unique to consumer research (see, e.g. Tetlock’s 1998 discussion of the “reductionist syllogism” in his review of research on world politics). However, because consumer behavior is such a broad area in which the central topics are shared with other fields and disciplines, it is particularly susceptible to division and disagreement regarding the key research topics and how research should be conducted. In this review we have explored the differences between three particular subfields—social cognition, BDT, and postmodern consumer research—and highlighted the opportunities for greater collaboration.

Importantly, although multiple and, in some cases, incompatible influences tend to generate disagreements, the exposure to multidisciplinary influences and the different approaches represented in consumer research are also a significant strength that contributes to the quality and diversity of scholarly work. Thus, some studies conducted by consumer researchers represent basic research, dealing with the same fundamental issues that researchers in the related disciplines investigate. In fact, in certain basic research areas that are particularly relevant to businesses and consumers, such as decision making, business schools, including consumer researchers, appear to have taken the lead from the relevant disciplines (e.g. psychology). In addition to basic research, consumer researchers will also continue to apply, test, and extend theories developed in other disciplines. Such research can have significant impact on the field and often contributes to theory development. In particular, the consumer environment imposes relevant constraints and the stimuli used are often richer and more complex than those employed by researchers in psychology. This, in turn, forces the researcher to evaluate the boundaries

of the theory, which can lead to theoretical extensions and improve our understanding of the moderating factors and the conditions under which the theory is applicable.

A third type of consumer research, which we believe deserves greater emphasis, focuses on substantive phenomena of interest and often leads to theory development (e.g. Alba 1999, Lutz 1991, Shimp 1994; see also Cialdini 1980). Because such research tends to be motivated by phenomena rather than by theory-testing, it is sometimes viewed as atheoretical and of lower status. However, rigorous studies of substantive phenomena build on the relative advantages and incentives of consumer researchers (and business school faculty more generally), and in many cases make significant contributions to theory development. Furthermore, compared to researchers in the basic disciplines, consumer researchers often have greater exposure to "real world" problems (e.g. of organizations and consumers) and easier access to data relating to substantive phenomena.

The saying that "there is nothing more practical than a good theory" not withstanding, another advantage of substantive phenomena-driven research is that it is usually more relevant, particularly to the phenomena being investigated. Whether or not researchers believe it is good for consumer research (e.g. Holbrook 1985), the pressure on business school faculty to be relevant and the incentives to conduct research that is relevant in a reasonably concrete way to managers and/or other constituencies continue to play a significant role that many researchers are unlikely to ignore. Although ulterior motives have some negative associations, an emphasis on relevance should not come at the expense of rigor and, ultimately, theoretical contribution. Furthermore, in addition to tightly controlled lab studies that allow unconfounded tests of cause and effect, substantive domain-focused investigations will benefit from the inclusion of studies in more naturalistic settings, even if such tests involve a certain compromise in terms of internal validity. Also, when conducting lab studies, consumer research will benefit from greater attention to using stimuli and tasks that include the essential characteristics of the relevant substantive domains.

Consider, for example, a study of buyer behavior in online auctions, which examines various factors that influence bidding behavior and the willingness to pay for items being auctioned. In addition to improving our understanding of online auctions, such research might have significant theoretical implications regarding escalation, competitive behavior, inference making, perceived value, and other conceptually important issues. A researcher embarking on such a project may begin the investigation by observing actual online auctions, which might offer some tentative hypotheses regarding relevant influences. However, in all likelihood, the presence of confounding factors will limit the researcher's ability to establish unambiguously the generality of the observed phenomena and their causes. Accordingly, the researcher may conduct lab studies using simulated auctions, possibly providing incentives to participants, such as indicating that one or more of the auctions will actually be applied. This lab research, in turn, may lead to additional field experiments that might provide further insights.

In summary, the relative emphasis on theory-testing versus substantive domain-driven research and on external validity is relevant also to the question of the identity of the consumer research field. A greater emphasis on substantive phenomena and the combination of tightly controlled lab studies with investigations in more naturalistic settings, we believe, will differentiate the field and enhance its impact on both theory and practice. Indeed, buyer behavior offers an exceptionally rich domain for studying a wide range of real world phenomena that have potentially important theoretical implications. Furthermore, with the advancement of new technologies and the rise of the Internet, consumer researchers are in a much better position today to conduct investigations that deal with marketplace phenomena while maintaining experimental control. Finally, a greater emphasis on rigorous, systematic, substantive phenomena-driven research has the potential to produce major contributions to theory, precisely because the starting point is not an existing theory. Thus, such research can significantly enhance the impact of the consumer research field on researchers in the consumer and related fields, industry, and public policy makers.

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LITERATURE CITED

- Aaker D, Keller K. 1990. Consumer evaluations of brand extensions. *J. Mark.* 54:27–41
- Aaker JL. 1997. Dimensions of brand personality. *J. Mark. Res.* 34:347–56
- Aaker JL, Maheswaran D. 1997. The effect of cultural orientation on persuasion. *J. Consum. Res.* 24:315–28
- Alba J. 1999. President's column: loose ends. *Assoc. Consum. Res. Newsl.*, Dec., p. 2
- Alba J, Hutchinson W. 1987. Dimensions of consumer expertise. *J. Consum. Res.* 13:411–45
- Alba J, Hutchinson W, Lynch J. 1991. Memory and decision making. See Robertson & Kassirjian 1991, pp. 1–49
- Alba JW, Mela CF, Shimp TA, Urbany JE. 1999. The effect of discount frequency and depth on consumer price judgments. *J. Consum. Res.* 26:99–114
- Anand P, Sternthal B. 1990. Ease of message processing as a moderator of repetition effects in advertising. *J. Mark. Res.* 27:345–53
- Andreassen AR. 1985. Consumer responses to dissatisfaction in loose monopolies. *J. Consum. Res.* 12:135–41
- Ariely D, Wallsten TS. 1995. Seeking subjective dominance in multidimensional space: an explanation of the asymmetric dominance effect. *Organ. Behav. Hum. Decis. Process.* 63(3):223–32
- Armstrong JS. 1991. Prediction of consumer behavior by experts and novices. *J. Consum. Res.* 18(2):251–56

- Arnould E, Wallendorf M. 1994. Market-oriented ethnography: interpretation building and marketing strategy formulation. *J. Mark. Res.* 31(4):484-504
- Arnould EJ, Fischer E. 1994. Hermeneutics and consumer research. *J. Consum. Res.* 21(1):55-70
- Arnould EJ, Price LL. 1993. River magic: extraordinary experience and the extended service encounter. *J. Consum. Res.* 20(1):24-45
- Bagozzi RP, Baumgartner H, Yi Y. 1992. State versus action orientation and the theory of reasoned action: an application to coupon usage. *J. Consum. Res.* 18:505-18
- Bass FM, Wind J. 1995. Introduction to the special issue: empirical generalizations in marketing. *Mark. Sci.* 14(3) Part 2:G6-19
- Baumgartner H, Sujan M, Padgett D. 1997. Patterns of affective reactions to advertisements: the integration of moment-to-moment responses into overall judgments. *J. Mark. Res.* 34:219-32
- Beales H, Mazis MB, Salop SC, Staelin R. 1981. Consumer search and public policy. *J. Consum. Res.* 8:11-22
- Bearden WO, Etzel MJ. 1982. Reference group influence on product and brand purchase decisions. *J. Consum. Res.* 9:183-94
- Belk RW. 1986. Generational differences in the meaning of things. *Advert. Consum. Psychol.* 3:199-213
- Belk RW. 1988. Possessions and the extended self. *J. Consum. Res.* 15(2):139-68
- Belk RW, Costa JA. 1998. The mountain man myth: a contemporary consuming fantasy. *J. Consum. Res.* 218-40
- Bettman J, Luce MF, Payne JW. 1998. Constructive consumer choice processes. *J. Consum. Res.* 25:187-217
- Bettman JR. 1971. The structure of consumer choice processes. *J. Mark. Res.* 8:465-71
- Bettman JR. 1979. *An Information Processing Theory of Consumer Choice*. Reading, MA: Addison Wesley
- Bettman JR. 1986. Consumer psychology. *Annu. Rev. Psychol.* 37:257-89
- Bettman JR. 1993. The decision maker who came in from the cold. In *Advances in Consumer Research*, ed. L McAlister, M Rothschild, 20:7-11. Provo, UT: Assoc. for Consumer Res.
- Bettman JR, Park CW. 1980. Effects of prior knowledge and experience and phase of the choice process: a protocol analysis. *J. Consum. Res.* 7:234-48
- Biehal G, Chakravarti D. 1982. Information presentation format and learning goals as determinants of consumers' memory retrieval and choice processes. *J. Consum. Res.* 8:431-41
- Biehal G, Chakravarti D. 1983. Information accessibility as a moderator of consumer choice. *J. Consum. Res.* 10:1-14
- Block LG, Anand Keller P. 1995. When to accentuate the negative: the effects of perceived efficacy and message framing on intentions to perform health-related behavior. *J. Mark. Res.* 32:192-203
- Brinberg D, McGrath J. 1985. *Validity and the Research Process*. Beverly Hills, CA: Sage
- Broniarczyk SM, Alba J. 1994. The importance of the brand in brand extension. *J. Mark. Res.* 31:214-28
- Brucks M. 1988. Search monitor: an approach for computer controlled experiments involving consumer information search. *J. Consum. Res.* 15:117-21
- Calder BJ, Phillips LW, Tybout AM. 1981. Designing research for applications. *J. Consum. Res.* 8:197-207
- Calder BJ, Tybout AM. 1987. What consumer research is. *J. Consum. Res.* 14(1):136-40
- Calder B, Tybout AM. 1999. A vision of theory, research, and the future of business schools. *J. Acad. Mark. Sci.* 27(3):359-66
- Carmon Z, Simonson I. 1998. Price-quality tradeoffs in choice vs. matching: new insights into the prominence effect. *J. Consum. Psychol.* 7:323-43
- Carpenter GS, Nakamoto K. 1989. Consumer preference formation and pioneering advantage. *J. Mark. Res.* 26:285-98
- Chaiken S. 1980. Heuristic versus systematic information processing and the use of source

- versus message cues in persuasion. *J. Pers. Soc. Psychol.* 39:752–66
- Cialdini RB. 1980. Full cycle social psychology. In *Applied Social Psychology Annual*, ed. L Bickman, 1:21–47. Beverly Hills, CA: Sage
- Cohen JB, Chakravarti D. 1990. Consumer psychology. *Annu. Rev. Psychol.* 41:243–88
- Cohen JB. 1989. An overextended self? *J. Consum. Res.* 16:125–28
- Coupey E. 1994. Restructuring: constructive processing of information displays in consumer choice. *J. Consum. Res.* 21:83–99
- Coupey E, Irwin JR, Payne JW. 1998. Product category familiarity and preference construction. *J. Consum. Res.* 24:459–68
- Deighton J. 1984. The interaction of advertising and evidence. *J. Consum. Res.* 11:763–70
- Deshpande R, Stayman DM. 1994. A tale of two cities: distinctiveness theory and advertising effectiveness. *J. Mark. Res.* 31:57–64
- Dhar R. 1997. Consumer preference for a no-choice option. *J. Consum. Res.* 24:215–31
- Dhar R, Nowlis SM. 1999. The effect of time pressure on consumer choice deferral. *J. Consum. Res.* 25:369–84
- Dhar R, Simonson I. 1999. Making complementary choices in consumption episodes: highlighting versus balancing. *J. Mark. Res.* 36:29–44
- Drolet A, Simonson I, Tversky A. 2000. Indifference curves that travel with the choice set. *Mark. Lett.* 11:199–209
- Edell JA, Chapman Burke M. 1987. The power of feelings in understanding advertising effects. *J. Consum. Res.* 14:421–33
- Engel J, Kollat D, Blackwell R. 1968. *Consumer Behavior*. New York: Holt, Rinehart & Winston
- Fazio RH, Ledbetter JE, Towles-Schwen T. 2000. On the cost of accessible attitudes: detecting that the attitude object has changed. *J. Pers. Soc. Psychol.* 78:197–210
- Fazio RH, Powell MC, Williams CJ. 1989. The role of attitude accessibility in the attitude-to-behavior process. *J. Consum. Res.* 16:280–88
- Feldman JM, Lynch JG Jr. 1988. Self generated validity and other effects of measurement on belief, attitude, intention and behavior. *J. Appl. Psychol.* 73:421–35
- Firat AF, Venkatesh A. 1995. Liberatory post-modernism and the reenchantment of consumption. *J. Consum. Res.* 22:239–67
- Fischer G, Carmon Z, Ariely D, Zauberma G. 1999. Goal-based construction of preference: task goals & the prominence effect. *Manage. Sci.* 45:1057–75
- Fishbein M, Ajzen I. 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley
- Fiske ST, Taylor SE. 1984. *Social Cognition*. New York: McGraw-Hill
- Fiske ST, Pavelchek MA. 1986. Category-based versus piecemeal-based affective responses: development in schema-triggered affect. In *Handbook of Motivation and Cognition: Foundations of Social Behavior*, ed. RM Sorrentino, ET Higgins, pp. 167–203. New York: Guilford
- Folkes VS. 1984. Consumer reactions to product failure: an attributional approach. *J. Consum. Res.* 10:398–409
- Fournier S. 1998. Consumers and their brands: developing relationship theory in consumer research. *J. Consum. Res.* 24:343–73
- Fournier S, Mick DG. 1999. Rediscovering satisfaction. *J. Mark.* 63:5–23
- Frank R. 1974. Letter from the editor. *J. Consum. Res.* 1:i
- Friestad M, Wright P. 1994. The Persuasion Knowledge Model: how people cope with persuasion attempts. *J. Consum. Res.* 21:1–31
- Gaeth G, Levin I. 1988. How consumers are affected by the framing of attribute information before and after consuming the product. *J. Consum. Res.* 15:374–78
- Gardner BB, Levy SL. 1955. The product and the brand. *Harv. Bus. Rev.* Mar–Apr:33–38
- Gilbert D, Fiske ST, Lindzey G. 1998. *The Handbook of Social Psychology*, Vol. 1. New York: McGraw-Hill. 4th ed.

- Gould SJ. 1991. The self manipulation of my pervasive, perceived vital energy through product use: an introspective-Praxis perspective. *J. Consum. Res.* 18:194-207
- Gourville JT, Soman D. 1998. Payment depreciation: the behavioral effects of temporally separating payments from consumption. *J. Consum. Res.* 25:160-74
- Green PE, Srinivasan V. 1978. Conjoint analysis in consumer research: issues and outlook. *J. Consum. Res.* 5:103-23
- Gregan-Paxton J, Roedder-John D. 1997. The emergence of adaptive decision making in children. *J. Consum. Res.* 24:43-56
- Guest L. 1962. Consumer analysis. *Annu. Rev. Psychol.* 13:315-344
- Hirschman EC. 1994. Consumers and their animal companions. *J. Consum. Res.* 20:616-32
- Hoch SJ. 1988. Who do we know: predicting the interests and opinions of the American consumer. *J. Consum. Res.* 15:315-24
- Hoch SJ, Ha Y. 1986. Consumer learning: advertising and the ambiguity of product experience. *J. Consum. Res.* 13:221-33
- Holbrook MB. 1985. Why business is bad for consumer research: the three bears revisited. *Adv. Consum. Res.* 12:145-56
- Holbrook MB. 1987. What is consumer research? *J. Consum. Res.* 14:128-32
- Holbrook MB, Grayson MW. 1986. The semiology of cinematic consumption: symbolic consumer behavior in *Out of Africa*. *J. Consum. Res.* 13:374-81
- Holbrook MB, Hirschman E. 1982. The experiential aspects of consumption: consumer fantasies, feelings, and fun. *J. Consum. Res.* 9:132-40
- Howard JA, Sheth JN. 1969. *The Theory of Buyer Behavior*. New York: Wiley
- Hsee CK, Leclerc F. 1998. Will products look more attractive when presented separately or together? *J. Consum. Res.* 25:175-86
- Huber J, Payne J, Puto C. 1982. Adding asymmetrically dominated alternatives: violations of regularity and the similarity hypothesis. *J. Consum. Res.* 9:90-98
- Huber J, Puto C. 1983. Market boundaries and product choice: illustrating attraction and substitution effects. *J. Consum. Res.* 10:31-44
- Hudson LA, Ozanne JL. 1988. Alternative ways of seeking knowledge in consumer research. *J. Consum. Res.* 14:508-21
- Jacoby J, Speller DE, Berning CK. 1974. Brand choice behavior as a function of information load. *J. Consum. Res.* 1:33-42
- Jacoby J. 1976. Consumer psychology: an octennium. *Annu. Rev. Psychol.* 27:331-58
- Janiszewski C. 1988. Preconscious processing effects: the independence of attitude formation and conscious thought. *J. Consum. Res.* 15:199-209
- Johar G, Pham MT. 1999. Relatedness, prominence, and constructive sponsor identification. *J. Mark. Res.* 26:299-312
- Johnson MD. 1984. Consumer choice strategies for comparing noncomparable alternatives. *J. Consum. Res.* 11:741-53
- Kahn BE, Louie TA. 1990. Effects of retraction of price promotions on brand choice behavior for variety-seeking and last-purchase-loyal consumers. *J. Mark. Res.* 27:279-89
- Kahneman D, Tversky 1979. Prospect theory: an analysis of decision under risk. *Econometrica* 47:263-91
- Kardes FR. 1988. Spontaneous inference processes in advertising: the effects of conclusion omission and involvement on persuasion. *J. Consum. Res.* 15:225-33
- Kardes FR, Kalyanaram G, Chandrashekar M, Dornof RJ. 1993. Brand retrieval, consideration set composition, consumer choice, and the pioneering advantage. *J. Consum. Res.* 20:62-75
- Kassarjian H. 1982. Consumer psychology. *Annu. Rev. Psychol.* 33:619-49
- Kassarjian H, Robertson T. 1968. *Perspectives in Consumer Behavior*. Englewood Cliffs, NJ: Prentice Hall
- Keller KL. 1987. Memory factors in advertising: the effect of advertising retrieval cues on brand evaluations. *J. Consum. Res.* 14:316-33
- Keller KL. 1993. Conceptualizing, measuring,

- and managing customer-based brand equity. *J. Mark.* 57:1–22
- Kisielius J, Sternthal B. 1984. Detecting and explaining vividness effects in attitudinal judgments. *J. Mark. Res.* 21:54–64
- Krosnick JA, Shuman H. 1988. Attitude intensity, importance, and certainty and susceptibility to response effects. *J. Pers. Soc. Psychol.* 54:940–52
- Lehmann DR. 1996. Presidential address: knowledge generalization and the conventions of consumer research: a study in inconsistency. In *Advances in Consumer Research*, ed. KP Corfman, JG Lynch Jr, 23:1–5. Provo, UT: Assoc. Consum. Res.
- Levy SL. 1959. Symbols for sale. *Harv. Bus. Rev.* Jul–Aug:117–24
- Luce MF. 1998. Choosing to avoid: coping with negatively emotion-laden consumer decisions. *J. Consum. Res.* 24:409–22
- Lutz RJ. 1977. An experimental investigation of causal relations among cognitions, affect, and behavioral intention. *J. Consum. Res.* 3:197–208
- Lutz RJ. 1991. Editorial. *J. Consum. Res.* 17:i–v
- Lynch JG Jr. 1982. On the external validity of experiments in consumer research. *J. Consum. Res.* 9:225–39
- Lynch JG Jr, Marmorstein H, Weigold MF. 1988. Choices from sets including remembered brands: use of recalled attributes and prior overall evaluations. *J. Consum. Res.* 15:169–84
- Mahajan J. 1992. The overconfidence effect in marketing management predictions. *J. Mark. Res.* 29:329–42
- McAlister L. 1982. A dynamic attribute satiation model of variety seeking behavior. *J. Consum. Res.* 9:141–50
- McGrath JE, Brinberg D. 1983. External validity and the research process: a comment on the Calder/Lynch dialogue. *J. Consum. Res.* 10(1):115–24
- McGuire WG. 1969. The nature of attitudes and attitude change. In *Handbook of Social Psychology*, ed. G Lindzey, E Aronson, 3:136–314. 2nd ed.
- McQuarrie EF, Mick DG. 1992. On resonance: a critical pluralistic inquiry into advertising rhetoric. *J. Consum. Res.* 17:180–97
- Menon G, Raghuraj P, Schwarz N. 1995. Behavioral frequency judgments: an accessibility-diagnostics framework. *J. Consum. Res.* 22:212–28
- Meyer RJ. 1981. A model of multiattribute judgments under attribute uncertainty and informational constraint. *J. Mark. Res.* 18:428–41
- Meyers-Levy J, Maheswaran D. 1991. Exploring differences in males' and females' processing strategies. *J. Consum. Res.* 18:63–70
- Meyers-Levy J, Tybout AM. 1997. Context effects at encoding and judgment in consumption settings: the role of cognitive resources. *J. Consum. Res.* 24:1–14
- Miller D. 1995. Consumption and commodities. *Annu. Rev. Anthropol.* 24:141–61
- Miniard PW, Cohen J. 1983. Modeling personal and normative influences on behavior. *J. Consum. Res.* 10:169–80
- Monroe KB. 1973. Buyer's subjective perceptions of price. *J. Mark. Res.* 10:70–80
- Morwitz VG, Johnson E, Schmittlein D. 1993. Does measuring intent change behavior? *J. Consum. Res.* 20:46–61
- Murray JB, Ozanne JL. 1991. The critical imagination: emancipatory interests in consumer research. *J. Consum. Res.* 18:129–44
- Newell A, Simon HA. 1972. *Human Problem Solving*. Englewood Cliffs, NJ: Prentice-Hall
- Nicosia F. 1966. *Consumer Decision Processes*. Englewood Cliffs, NJ: Prentice-Hall
- Norman DA, Borrow DG. 1975. On data-limited and resource-limited processes. *Cogn. Psychol.* 7:44–64
- Nowlis S, Simonson I. 1997. Attribute-task compatibility as a determinant of consumer preference reversals. *J. Mark. Res.* 34:205–18
- O'Guinn TC, Faber R. 1989. Compulsive buying: a phenomenological exploration. *J. Consum. Res.* 16:147–57

- Park CW, Milberg S, Lawson R. 1991. Evaluation of brand extensions: the role of product feature similarity and brand concept consistency. *J. Consum. Res.* 18:185-93
- Payne J. 1976. Task complexity and contingent processing in decision making: an information search and protocol analysis. *Organ. Behav. Hum. Perform.* 16:366-87
- Pechmann C, Ratneshwar S. 1994. The effects of antismoking and cigarette advertising on young adolescents' perceptions of peers who smoke. *J. Consum. Res.* 21:236-51
- Peter JP, Olson JC. 1993. *Consumer Behavior and Marketing Strategy*. Homewood, IL: Richard D. Irwin, Inc. 3rd ed.
- Petty RE, Cacioppo JT. 1996. Addressing disturbing and disturbed consumer behavior: Is it necessary to change the way we conduct behavioral science? *J. Mark. Res.* 33:1-8
- Petty RE, Cacioppo JT, Schumann D. 1983. Central and peripheral routes to advertising effectiveness: the moderating role of involvement. *J. Consum. Res.* 10:134-48
- Petty RE, Unnava R, Strathman AJ. 1991. Theories of attitude change. See Robertson & Kassarjian 1991, pp. 241-80
- Pham MT. 1998. Representativeness, relevance, and the use of feelings in decision making. *J. Consum. Res.* 25:144-59
- Pratt RW. 1974. ACR: a perspective. In *Advances in Consumer Research*, ed. S Ward, P Wright, 1:1-8. Urbana, IL: Assoc. Consum. Res.
- Prelec D, Loewenstein GF. 1998. The red and the black: mental accounting of savings and debt. *Mark. Sci.* 17:4-28
- Priester JR, Petty RE. 1996. The gradual threshold model of ambivalence: relating the positive and negative bases of attitudes to subjective ambivalence. *J. Pers. Soc. Psychol.* 71:431-49
- Ratner RK, Kahn BE, Kahneman D. 1999. Choosing less-preferred experiences for the sake of variety. *J. Consum. Res.* 26:1-15
- Ratneshwar S, Chaiken S. 1991. Comprehension's role in persuasion: the case of its moderating effect on the persuasive impact of source cues. *J. Consum. Res.* 18:52-62
- Reilly MD, Wallendorf M. 1987. A comparison of group differences in food consumption using household refuse. *J. Consum. Res.* 14:289-94
- Richins M. 1997. Measuring emotions in the consumption experience. *J. Consum. Res.* 24:127-46
- Ritchie JRB, McDougall GHG, Claxton JD. 1981. Complexities of household energy consumption and conservation. *J. Consum. Res.* 8:233-42
- Robertson TS, Kassarjian HH, eds. 1991. *Handbook of Consumer Behavior*. Englewood Cliffs, NJ: Prentice-Hall
- Russo JE, Staelin R, Nolan CA, Russell GJ, Metcalf BL. 1986. Nutrition information in the supermarket. *J. Consum. Res.* 13:48-70
- Schmitt BH, Zhang S. 1998. Language structure and categorization: a study of classifiers in consumer cognition, judgment, and choice. *J. Consum. Res.* 25:108-22
- Schwarz N, Bohner G. 2000. The construction of attitudes. In *Blackwell Handbook of Social Psychology: Intrapersonal Processes*, ed. A Tesser, N Schwarz. Oxford: Blackwell. In press
- Schouten JW, McAlexander JH. 1995. Subcultures of consumption: an ethnography of the new bikers. *J. Consum. Res.* 22:43-61
- Scott CA, Yalch RF. 1980. Consumer response to initial product trial: Bayesian analysis. *J. Consum. Res.* 7:32-41
- Sen S, Johnson EJ. 1997. Mere-possession effects without possession in consumer choice. *J. Consum. Res.* 24:105-17
- Shimp T. 1994. Presidential address: academic Appalachia and the discipline of consumer research. *Adv. Consum. Res.* 21:1-7
- Shimp TA, Kavas A. 1984. The theory of reasoned action applied to coupon usage. *J. Consum. Res.* 11:795-809
- Shiv B, Fedorikhin A. 1999. Heart and mind in conflict: the interplay of affect and cognition in consumer decision making. *J. Consum. Res.* 26:278-92

- Simonson I. 1989. Choice based on reasons: the case of attraction and compromise effects. *J. Consum. Res.* 16:158–74
- Simonson I. 1990. The effect of purchase quantity and timing on variety seeking behavior. *J. Mark. Res.* 27:150–62
- Simonson I. 1992. The influence of anticipating regret and responsibility on purchase decisions. *J. Mark. Res.* 19:105–18
- Simonson I, Tversky A. 1992. Choice in context: tradeoff contrast and extremeness aversion. *J. Mark. Res.* 29:281–95
- Stern BB. 1989. Literary criticism and consumer research: overview and illustrative analysis. *J. Consum. Res.* 16:322–34
- Sternthal B, Dholakia R, Leavitt C. 1978. The persuasive effect of source credibility: tests of cognitive response. *J. Consum. Res.* 4:252–60
- Sujan M. 1985. Consumer knowledge: effects on evaluation strategies mediating consumer judgments. *J. Consum. Res.* 12:31–46
- Taylor SE. 1998. The social being in social psychology. See Gilbert et al 1998, pp. 58–95
- Tetlock P. 1998. Social psychology and world politics. In *The Handbook of Social Psychology*, ed. D Gilbert, S Fiske, G Lindzey, 2:868–912. New York: McGraw-Hill. 4th ed.
- Thaler R. 1985. Mental accounting and consumer choice. *Mark. Sci.* 4:199–214
- Thompson CJW. 1996. Caring consumers: gendered consumption meanings and the juggling lifestyle. *J. Consum. Res.* 22:388–407
- Thompson CJW, Locander WB, Pollio HR. 1989. Putting consumer experience back into consumer research: the philosophy and method of existential-phenomenology. *J. Consum. Res.* 16:133–46
- Tybout A, Artz N. 1994. Consumer psychology. *Annu. Rev. Psychol.* 45:131–69
- Tybout A, Sternthal B, Calder B. 1983. Information availability as a determinant of multiple request effectiveness. *J. Mark. Res.* 20:280–90
- Unnava R, Agarwal S, Haugtvedt C. 1996. Interactive effects of presentation modality and message-generated imagery on recall of advertising information. *J. Consum. Res.* 23:81–93
- Wallendorf M, Brucks M. 1993. Introspecting in consumer research: implementation and implications. *J. Consum. Res.* 20:339–59
- Wells WD. 1993. Discovery-oriented consumer research. *J. Consum. Res.* 21:319–31
- Wernerfelt B. 1995. A rational reconstruction of the compromise effect: using market data to infer utilities. *J. Consum. Res.* 21:627–33
- West PM, Broniarczyk SM. 1998. Integrating multiple opinions: the role of aspiration level on consumer response to critic consensus. *J. Consum. Res.* 25:38–51
- Winer RS. 1999. Experimentation in the 21st century: the importance of external validity. *J. Acad. Mark. Sci.* 27:349–58
- Wright P. 1973. The cognitive processes mediating acceptance of advertising. *J. Mark. Res.* 10:53–62
- Zajonc R. 1998. Emotions. See Gilbert et al 1998, pp. 591–632



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