Mission (Largely) Accomplished: What’s Next for Consumer BDT-JDM Researchers?
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ABSTRACT
A main objective of Behavioral Decision Theory (BDT) research — demonstrating that economic theory often fails as a description of decision making as well as gaining insights into systematic influences on judgment and choice — has been largely accomplished. This influential research program, published in psychology, decision making, marketing, and other fields, has had unique characteristics that combined criteria employed in economics and psychology. Now that the prominent portion of the BDT agenda has been largely completed, it is time to consider whether the BDT and greater judgment and decision making (JDM) community in marketing will pursue a new direction or just follow the topics of the day (e.g., current topics in social psychology, public policy applications of previous JDM findings). I propose a broad research area — the interaction between the evolving information environment and consumer JDM — that raises a wide range of important questions and may fit the skills and interests of BDT researchers. In addition to raising new JDM concepts and problems, the proposed area can lead to major revisions of long established frameworks of consumer behavior and marketing. It is far from obvious, however, that BDT researchers/marketing professors, who are accustomed to studying general purpose JDM topics and are aligned with the broader JDM and social psychology community, will be receptive to a consumer-centric research program.

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This article has three related objectives. First, I argue that a main mission of research related to Behavioral Decision Theory (BDT) — demonstrating that economic theory often fails as a description of decision making and gaining insights into systematic influences on judgment and decision making (JDM) — has been accomplished. Thus, it is an opportune time to review the characteristics of BDT research and its impact within the consumer research and marketing fields. The second objective is to explore new research directions that BDT and, more broadly, JDM researchers who are also marketing professors might pursue now that a key purpose of their main research area has been largely achieved. I also briefly discuss the implications of the dual identity and research priorities of JDM-marketing faculty, who immigrated from psychology, for the selection of a future JDM research direction. My third objective is to propose a specific research area that is more marketing-focused than many BDT–JDM researchers have been accustomed to. In particular, I identify the interaction between the evolving consumer information environment and decision making as an important and rich area that offers conceptually and practically interesting and important JDM and marketing questions. Sample research topics within this broad area, which can lead to a rewriting of much of the consumer behavior and marketing textbooks, are identified.

It is a good time to have this discussion because, as suggested, the arguably most prominent and distinctive objective of BDT research has been largely accomplished. Relatedly, as I see it, today’s JDM topics have less to offer than the JDM research of the 1970–1990s. Specifically, although at the present time we witness a growing interest in public policy applications of previous BDT and JDM findings, in my assessment relatively few important, conceptually new JDM topics have been introduced over the past decade or so. The judgment heuristics and biases (Tversky and Kahneman, 1974) and implications of Prospect Theory (Kahneman and Tversky, 1979) have already been thoroughly studied, and the notion that people often do not maximize value has been settled. Accordingly, it is time to review what BDT has accomplished and look forward to possible new directions. I also discuss the research community, focusing on BDT–JDM scholars who are also professors of marketing, though the discussion may have implications for the broader BDT–JDM field.

Before proceeding, two important qualifications need to be stated. First, in the tradition of Kahneman and Tversky, I focus on the portion of BDT field that has used economic theory and, in particular, the assumption of value maximization as a benchmark, such as work pertaining to preference reversals. I devote less attention to BDT research about the process of choice, such as effort–accuracy tradeoffs (Payne et al., 1993), decision strategies (e.g., Bettman, 1979), and the information processing impact of goals and commitment. By its nature, research about process is likely to be ongoing and is not susceptible to ever being “accomplished.” Furthermore, unlike the BDT
research program discussed here, BDT research regarding choice processes is similar in many respects to non-BDT consumer research areas, such as studies of persuasion processes, attitude strength, and the effect of vividness on information processing. It is noteworthy, however, that a large part of the new research program proposed subsequently revolves around changes in consumers’ decision processes.

Second, it should be emphasized that the below discussion of BDT research represents my views and is likely to misrepresent the views of some of the other researchers in this field. Like any large research community, the consumer and general BDT field has consisted of researchers with different views, employing different research methods, and having different tastes in research.

The BDT Era: Accomplishments and Characteristics of BDT Research in Marketing and Beyond

The Mission and Target Audience

The BDT field has evolved in all likelihood following Simon’s (e.g., 1956) path-breaking work on bounded rationality and the growing recognition that normative decision models are often violated as descriptive frameworks. A related consumer research topic that received a great deal of attention during the 1970s focused on decision strategies or rules that consumers use or, at least, might use (e.g., Bettman, 1979; Payne, 1976; Wright, 1975).

Payne et al. (1992) characterized the typical BDT research process as follows: “it often proceeds by testing the descriptive accuracy of normative theories of judgment and choice” (p. 88). One of the first robust preference reversal demonstrations was published around 1970 (Lichtenstein and Slovic, 1971; violations of expected utility theory and the independence axiom appeared in the literature much earlier). In the consumer decision making literature, the attraction effect (Huber et al. (1982); also known as the “asymmetric dominance effect”) was perhaps the first published demonstration of an important violation of value maximization and the regularity assumption.

When the Huber et al. paper was published, demonstrations of violations of normative theories were not a mainstream consumer behavior topic. In those days, researchers were more interested, for example, in testing various aspects of the Ajzen and Fishbein (e.g., 1977) model regarding the relations between attitudes and behavior, such as whether the effect of attitudes on behavior is mediated by intentions. The consumer BDT literature expanded rapidly after the introduction of the attraction effect, demonstrating a wide range of context, task, and framing effects (for reviews, see, e.g., Bettman et al., 1998; Simonson, 1993).
The target audience of consumer BDT research represented a wide range of fields, including marketing, economics, psychology, law, political science, and other fields. These target audiences have largely dictated the BDT research methods and criteria. Thus, BDT researchers in marketing and other fields tended to present empirical evidence that economists might find persuasive. At the same time, consumer BDT researchers had to answer to journal reviewers who relied on criteria that are typically applied in more psychology-oriented journals, demanding insights into processes, mediators, rival accounts, and boundary conditions. This combination of influences has created a unique set of research characteristics.

Although there are certainly exceptions, by and large, economists tend not to be particularly interested in, nor do they trust, psychological theories and analyses of psychological processes. By contrast, demonstrations of preference reversals and various “effects” that are robust and are not susceptible to explanations based on existing normative theories receive attention because they can pose a hard to deny challenge to the notion of value maximization and other assumptions of economics. For example, economists went to great lengths to refute the original preference reversal (Grether and Plott, 1979; Lichtenstein and Slovic, 1971), to no avail.

**Features of BDT Research**

As indicated, consumer BDT researchers have tended to conduct research and emphasize the criteria that could influence proponents of normative decision theories, particularly economists. The emphasis has been on “effects,” many of which are quite robust whereas others are still debated (e.g., Frederick et al., 2014; Huber et al., 2014; Simonson, 2014). The attraction effect (Huber et al., 1982) has been influential despite the lack (up to this date) of a clear, agreed-upon explanation. Similarly, the compromise effect (Simonson, 1989) has been shown to be inconsistent with value maximization (Tversky and Simonson, 1993). At the same time, this effect is far from universal; for example, it is not observed in choices among gambles (attributes: probability and payoff), insurance plans (premium and coverage), and ice creams (taste and fat content) for reasons that are not fully understood.

Consumer BDT researchers have tried to offer explanations for their effects, test the explanations, and identify moderators and boundary conditions. Less enthusiastically, but in some cases out of necessity (i.e., the need to get an article published in a journal), they also conducted mediation analyses. The two most influential JDM researchers, Daniel Kahneman and Amos Tversky, have not applied mediation analyses (e.g., the Baron and Kenny test); having discussed mediation and path analyses more generally with Amos Tversky, this avoidance was not by accident and reflected his skepticism regarding the value of such analyses in terms of providing insights into mental processes. As a reflection of
the reluctance to say or assume more about underlying psychological processes than BDT researchers felt comfortable doing, they also tended to avoid “boxes- and-arrows” type frameworks, the kind of frameworks that one later tries to support based on various measures (e.g., multiple ratings of construct proxies).

BDT researchers, following the economists’ research criteria, have had a preference for behavioral measures over ratings. There are, of course, many cases where the use of ratings is appropriate and/or unavoidable, but by and large, BDT researchers have tended to favor choice or other behavioral measures as dependent measures whenever possible. Not all criteria of the BDT target audience have been implemented. In particular, economists place great value on running studies in which respondents have real incentives. Consumer BDT researchers have not applied that rule nearly as much as economists, though possibly more than the typical consumer researcher. Realism in studies has also been an important consideration, though it has been applied inconsistently. There is little doubt that running studies that involve real or at least realistic stimuli and tasks is a major determinant of the impact of published consumer research. Thus, for example, Levin and Gaeth’s (1988) well-known ground beef example of attribute framing would have likely been much less memorable had subjects not tasted real beef. Finally, one criterion of economists — not deceiving subjects about the purpose of the study in which they participate — has been largely ignored by consumer BDT researchers; in that regard, they have acted more like psychologists.

Another (non-universal) tendency of many BDT researchers has been to prefer lower-order (mostly two-way interactions or even main effects) over higher-order (three-way or even four-way) interactions. Although one should be careful with over-generalizations, higher-order interactions often involve predictions and theoretical nuances that go beyond what many BDT researchers feel they can comfortably support regarding the underlying psychological process. Furthermore, I would hypothesize that there is a negative correlation between the interaction order and likelihood of replication — that is, higher order interactions are less likely to replicate, particularly if one were to vary the method, the specific manipulation, and/or the dependent measures.

Consistent with the preference for lower-order interactions, BDT research has often involved what might be called minimalist tests. Minimalist tests attempt to capture broad phenomena using a seemingly simple, basic test. For example, showing that the addition of a third option to a two-option set can reverse the preference order within the core set can offer important insights based on a very basic, simple test (e.g., Huber et al., 1982; Simonson, 1989). Similarly, Hsee et al. (2003) used a minimalist methodology to demonstrate a general principle relating to people’s tendency to maximize a medium (e.g., money) instead of focusing on the ultimate outcome.

The simplicity of minimalist studies often allows for tests with high internal validity that establish a cause-and-effect relation using a design that is less
susceptible to rival explanations. At the same time, the assumption is that the minimalist tests apply to a wide range of real world situations. The generalizability of the minimalist findings to the real world depends on the presence of real world confounding factors. As we have learned, context and details often matter. Thus, if reality is typically different in important ways, the lessons learned through controlled minimalist tests may not apply in many (or any) particular cases. This topic will be discussed further below when examining the implications of the current consumer information environment for research methods and the role of external validity.

Considering that some of the things (e.g., mediation analyses) that consumer and other BDT researchers have tended to avoid have become the hallmarks or litmus tests of what many reviewers consider important for theory-based research, some in the consumer research field have referred to such research as “BDP” — Behavioral Decision Phenomena. So be it. As long as the phenomena lead to generalizable explanations (or frameworks) regarding judgment and decision making and are deemed interesting and publishable in their own right, it might be better to practice what you value most and avoid as much as possible what you value less or are skeptical of. Over time, observed effects/phenomena may often lead to theory development whether or not they were originally derived from prior theory (see also, Lynch et al. (2012)).

Moreover, consumer BDT research has had great impact in both marketing and on other fields, as reflected, for example, in the number of citations. Although this observation is not based on a systematic analysis, it appears that the number of citations in journals of other fields and disciplines to BDT work published in marketing journals is high relative to other behavioral research areas published in marketing journals. Furthermore, marketing BDT research has been of more interest and has received more attention from quantitative researchers in marketing than most other behavioral topics. As an indication of this interest, the premiere quantitative marketing journal, Marketing Science, has published over the years a number of influential BDT articles (e.g., Prelec and Loewenstein, 1998; Simonson, Carmon, et al., 1994; Thaler, 1985; Wertenbroch, 1998).

The BDT Research Process

Beyond research methods, the “debunk normative theory” mentality and the evaluation criteria used by the BDT audience have greatly influenced the skills of BDT researchers. Memorable, counterintuitive findings have had the greatest impact on the BDT audience, both the external audience (e.g., economists) and the internal audience (the BDT community). By contrast, refinements and increments to prior findings tended to be valued less. In other fields, such as social psychology, extending and building on existing theories is highly valued and doing “incremental” research is often seen as
an important contribution and the proper way to advance knowledge. By contrast, BDT researchers have been more likely to seek new effects, which are not derived from prior findings, and often tried to give the effects memorable names.

Lynch et al. (2012) discuss the differences among alternative research styles, including their orientation — theory-driven vs. phenomenon-driven, and their intended contribution — understanding a substantive phenomenon vs. building or expanding theory. BDT research cannot be easily classified along these dimensions, because (a) in some respects it is theory-driven, or, at least, goes against an established theory, but in most respects it is phenomenon-driven, and (b) it often tries to gain insights into a substantive phenomenon while also trying to expand theory.

A further, related distinction can be made based on the manner in which the researcher arrives at a topic. If we were to classify research topics on a scale that goes from “building on” (Lynch et al. (2012) theory-driven) at one end to “fishing” at the other end, BDT would be closer to the “fishing” extreme than most other areas of consumer and psychology topics (and I would be close to the extreme fishing edge among consumer BDT researchers). Effective “fishing” can lead to new insights and raise significant questions about existing theories. Arguably, good fishing is more likely to generate new research directions and significant new insights than research that is derived from existing theories. The challenge is to identify interesting questions, in many cases without having a solid basis for forming strong hypotheses or even the direction of an effect. However, to the extent that an interesting question yields a difference or an effect and that result proves to be robust (i.e., it replicates), this can often lead to a worthwhile contribution. To illustrate based on my personal experience, eventual generalizations regarding the effect of making multiple choices simultaneously on variety seeking and the effect of anticipating regret and responsibility on choice started from mere questions with no specific hypotheses in mind (Simonson, 1990, 1992).

It is noteworthy that recognizing the size of a candidate “fish” is often difficult, because what may initially appear like a big fish may turn out later to be an insignificant or nonreplicable finding whereas a small fish may turn out later to represent a much bigger topic than originally thought. To again illustrate from personal experience, while still a student Ravi Dhar conjectured that a person who flies first class or coach at different times and also takes either a taxi or a (cheaper) shuttle bus to the airport would probably be more likely to take the taxi when flying first class. At the time we thought that this was a nice curiosity but nothing more. A few years later we recognized that this represented one of many cases in which the attribute values of one choice affect the preferred attribute values of another choice within the same episode (Dhar and Simonson, 1999).
A “fishing” skill, which is likely an acquired and teachable skill, can be applied to almost any research area and is certainly not limited to identifying anomalous, “irrational” phenomena. As discussed below, the newly available secondary sources of information regarding consumer behavior on the Internet (including social media, shopping sites, etc.) offer fertile fishing grounds for potentially interesting research questions, which may then lead to theory development.

In conclusion, the mission of showing the deficiencies of normative theory as a descriptive framework has been largely accomplished. This line of research and its target audience have led to the development of research methods and a research community with characteristics that combine criteria and methods from economics and psychology. A question that arises is whether the consumer BDT community would seek a common next mission or assimilate into related fields, studying various current topics in consumer behavior, JDM, and social psychology. Compared to a shared new direction, the latter option, that amounts to “let the chips fall where they may” without setting any agenda or shared goal, is more likely to happen, similar to most other defaults that do not require coordinated action or opting in. Next, I propose a promising new direction for consumer BDT researchers, which is more marketing-focused than previous consumer BDT research but may fit the skills that BDT researchers have acquired while achieving their previous agendas.

**What’s Next for Consumer BDT Researchers?**

Given the conclusion that a key mission of BDT has largely run its course and reached the end of its lifecycle, a question that arises is whether the consumer BDT community would seek a new area or areas that fit its interests and skills and offer a broader mission, as opposed to assimilating into various current research areas and topics de jour. The consumer JDM community, perhaps more than other consumer behavior areas, consists of researchers with diverse backgrounds. Many researchers who moved to the consumer BDT area from social psychology continue to have strong ties to their original field and may pursue current issues in psychology. These and other researchers in marketing and other JDM-related fields have increasingly focused on topics with public policy implications, such as health and nutrition, nudges, the environment, financial decisions, aging, and a variety of other policy-relevant subjects. Such topics, for the most part, build on already established general principles and observations regarding judgment and choice while demonstrating their implications and value to society and consumers.

I propose a direction for BDT and other consumer researchers that is marketing- and consumer behavior-centric. Instead of dealing with topics that have some marketing relevance, the proposed area puts consumer behavior
and related marketing fundamentals at the forefront. As I argue below, this
direction is rich and promising from both conceptual and applied perspectives,
and it has implications not just for consumers and marketers but also for
public policy. Before I elaborate on this marketing-focused area for BDT and
other consumer researchers, it may be useful to address briefly the challenges
of getting ex-BDT researchers to place a higher value on marketing-focused
research.

I asked leading consumer researchers who moved from psychology to mar-
keting decades ago, including Joe Alba, Wes Hutchinson, and John Lynch,
what caused them to become full-time consumer researchers almost as soon
as they made their move. To paraphrase their responses, they were hired by
the University of Florida Marketing Department to study consumer behavior.
This was the expectation and understanding, and that is what they did. In
the process, they became interested in consumer behavior questions (and went
on to make major contributions to the literature and field and receive many
awards). Thus, they almost instantly became part of the consumer behavior
research community — their new home, with their psychology background
being just that.

Thirty years later, many things have changed, including the rapid devel-
opment of the consumer behavior field, with an order of magnitude more
consumer behavior researchers. The current size of the consumer behavior re-
search community has made it easier for “immigrant communities” to maintain
their original identities and interests, in some cases keeping consumer behavior
research as a lower priority necessity (this broad brush characterization varies
of course across individuals).

The consumer BDT field has been a particularly hospitable entry point
for JDM researchers who joined the consumer behavior field from psychology,
because many JDM topics apply to consumers as they do to other decision
makers. For example, various framing, task, and context effects have raised
issues that marketers, decision analysts, psychologists, political scientists, and
economists consider important.

Now, as I have proposed, things have changed and the question regarding
the research agenda going forward, especially for the JDM community, has
come to the fore. The mainstream BDT agenda, including the emphasis on
debunking the value maximization assumption, has been largely completed, and
many of the other current JDM topics appear to involve rather narrow issues,
some of which are not particularly relevant to consumer behavior. Although
the choice of research topics is an individual decision, having a discussion
about the direction, if any, for the large community of consumer behavior BDT
researchers may enable us to identify an important mission worth pursuing
instead of just letting the chips fall. In particular, as marketing professors who
have worked on BDT–JDM issues consider future research directions, one key
question they face is whether they wish to put a relatively greater emphasis on
consumers and marketing or continue with general purpose JDM topics that
may also have some marketing implications. I will elaborate on the case for the former option. Later, I revisit the obstacles faced by the proposal to get BDT–JDM researchers to become more mainstream marketing researchers.

**A Marketing Option for Consumer JDM Researchers:**

**The Interaction between the Evolving Information Environment and Consumer JDM**

**Introduction**

The research topics proposed below are focused on and are motivated by the evolving consumer information environment. However, the expected contribution of this research area goes well beyond marketing and has the potential to introduce new concepts and raise new questions pertaining to the interactions between judgment and choice and the evolving information environment. As indicated, the proposed marketing focus also brings to the fore the research identity of BDT–JDM researchers who are marketing professors.

In the past, the relation between many BDT (and non-BDT) researchers/marketing professors and the marketing field has not been in equilibrium. It has appeared in some cases as more of a relationship of convenience where the researchers’ intellectual and interest home has been in the broader JDM and social psychology field, with as much research published in marketing as needed to fulfill the implicit expectations associated with a marketing position. Even articles published in marketing journals have often had rather limited relevance to consumers and marketing, despite attempts to mention potential consumer and practical implications in the General Discussion. This situation is probably not unusual, not unique to BDT, and is inherent for researchers who were trained in a basic discipline and have moved to a more applied area. The marketing/consumer behavior-centric direction can change that situation, though a more realistic outcome is that researchers will gradually shift more of their research attention and priorities to marketing while continuing to also conduct general purpose JDM research. I next make specific topic suggestions for the proposed consumer-marketing direction, followed by further examination of the challenge of influencing the research priorities and focus on the BDT–JDM community in marketing.

**Consumer Decision Making as a Reflection and a Driver of the Information Environment: Sample Topics**

Much has already been written about the marketing and consumer behavior implications of the Internet and related media. But the scope and significance

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1 The research ideas in this section have benefitted from discussions with Emanuel Rosen and Ran Kivetz.
of some of the fundamental consumer JDM changes produced by the current information environment have not yet been carefully studied. These changes, in turn, raise important conceptual questions and are likely to have far reaching implications that call for a reassessment of many chapters in consumer behavior and marketing textbooks. Furthermore, new concepts and interesting JDM questions emerge almost daily, in some cases as a result of a new business idea we observe on or off the Internet.

Briefly, the current information-rich socially intensive environment has changed the accessibility and diagnosticity of information (Feldman and Lynch, 1988) about quality (broadly defined) and about the likely experience of using a product/service. Accessibility includes various aspects, such as the amount of information, the effort to obtain information, the fluency and scope of comparisons a consumer tend to make (see Simonson, Bettman, et al. (2013)), and the speed of information acquisition. Diagnosticity includes changes in information source types and their credibility, the ability to tailor obtained information to desired information, and the accuracy of experience quality predictions. Any aspect of consumer judgment and decision making and, correspondingly, any aspect of marketing that is influenced by these changes in the accessibility and diagnosticity of information may need to be reexamined, though in some cases the conclusion may be that the principles that underlie current theories still apply.

The following are specific examples of potentially interesting and important research questions that pertain to the impact of the changing information environment on consumer decision making and marketing. These questions are only briefly motivated (and are not ordered by importance or any other criterion):

**The effect of information accessibility and comparison fluency on consumers’ consideration sets**

Identifying alternatives in any category of interest and making comparisons among options based on predetermined or ad hoc criteria has become easier, faster, and less under marketers’ control. This rise in comparison fluency and diagnosticity, in turn, may have a wide range of effects, for example, on the size and composition of consumers’ consideration sets. The current information may also call for a new definition of consideration sets and/or a reevaluation of whether the notion of consideration sets remains a relevant way of thinking about the consumer choice process. For example, traditionally, consideration sets were presumed to be reasonably well defined at the start of the purchase process, such as a consumer who might only consider Canon and Nikon cameras. In the Internet environment, both familiar and unfamiliar options may become purchase candidates because they happen to be included among the search results, in which case the prominent listings on the results page/s may operate as the effective consideration set. Thus, although consumers still consider some
options and not others, the option set under consideration is often context- and technology-driven, and the presumed premeditation embedded in the consideration set concept may no longer apply.

*The effect of the evolving information environment on consumer “rationality”*

Although the term “rational” (and irrational) decisions has been defined in different ways, such as violations of value maximization, incoherent or inconsistent preferences, and emotional (rather than reason-based) choices, the conclusion that consumers are often irrational is now widely accepted. Popularized by books such as *Predictably Irrational* (Ariely, 2008), the belief in irrationality is now widely accepted among the general public. The most commonly used operationalization of irrationality among decision researchers has been based on violations of value maximization. Preferring a dominated option or expressing different preferences depending on the framing of options or the elicitation method (e.g., Tversky and Kahneman, 1981; Tversky, Sattath, et al., 1988) have been relied upon to demonstrate the absence of stable preferences and resulting irrational decisions.

The Internet information environment may very well moderate the effects relied upon to demonstrate irrational decision making and diminish the likelihood of decision phenomena that decision researchers have classified as irrational. Most “irrational” choices reflect the tendency to rely on relative option evaluations (Simonson, 2008). The readily available option-specific information on the web makes it much easier to judge each option individually, thereby diminishing the effects that reflect relative judgments. This, in turn, may diminish consumers’ susceptibility to context effects (e.g., asymmetric dominance and compromise effects) as well as framing and task effects. Of course, a decline in “irrationality” is not a main effect prediction, and susceptibility to “irrational” influences is likely to depend on factors such as the range of options consumers are exposed to, the accessibility of alternative frames, individual differences, and the degree to which external forces (e.g., marketers) can control the information environment.

A somewhat related question, which is also quite broad, relates to the effect of the information environment on the quality of choices consumers make. Measuring decision quality is challenging and requires precise, justifiable definitions (e.g., Jacoby, 1977; Keller and Staelin, 1987). However, the proposition that consumers can now better assess the quality of products under consideration and tend to rely less on inherently inaccurate quality cues (e.g., Simonson and Rosen, 2014) suggests that consumers do, on average, make better choices. Thus, despite the challenge of measuring decision quality, using criteria to be determined, it is important to study the interaction between specific characteristics of the information environment and the quality of consumer decisions.
Moderators of information overload and choice overload

A great deal has been written about information overload and choice overload (e.g., Iyengar and Lepper, 2000; Scheibehenne et al., 2010; Schwartz, 2005). The Internet offers potentially too much information; however, the availability of too much information does not mean that consumers experience overload or indecision, because the Internet typically also offers the tools to sort and efficiently process as much information as one desires. A research question that arises relates to the characteristics of the information environment and individual differences that moderate the likelihood and implications of information and choice overload. Perhaps more important, research is needed to gain a better understanding of the factors that moderate the types of information that consumers tend to select about the options under consideration. Indeed, the selected information and the sorting methodology can often largely determine the preferred option.

New forms of context and task effects

Like decision rules, choice context effects (e.g., the asymmetric dominance effect; Huber et al. (1982)) might occur when consumers observe a specific option set configuration that is not obscured by “noise.” Such situations may still be relevant online, but the amount of easily accessible information, the sequential nature of many online decision processes, and the inability to control and predict the considered information call for an examination of context and task effects that may arise under more typical purchase processes in the online environment. For example, while previously studied context effects often involved tradeoff contrasts and influences on bargain or safe-option perceptions, the new environment may be susceptible to content-based context effects. For instance, one might study the impact, if any, of review context effects, such as the joint impact of positive and negative reviews that are examined sequentially.

Redefining search and experience goods

Using the terminology of Nelson (1970), the current environment is turning an increasing range of products from experience goods to search goods, whose quality can be rather accurately assessed before purchase. That is, the enhanced accessibility of a great deal of information and the ability to find diagnostic information about actual product quality (e.g., from experts, reviewers, YouTube demonstrations, and friends) has effectively turned many (previously) experience goods into search goods. The moderators and implications of an enhanced ability to predict the experience quality of a product before purchase at the expense of extrinsic quality proxies (e.g., brand, price,
country-of-origin) raise important research questions. This “experience to search” trend is observed in some categories and among some consumers but not others, which means that research is needed to determine the interactions among consumer decision processes, category characteristics, and the accessible quality proxies.

Reevaluating the roles of extrinsic quality cues

A related broad topic refers to the consumer research literature that has focused on the roles of specific extrinsic quality cues. Much of the marketing management textbook pertains to the impact of extrinsic cues (as opposed to intrinsic quality cues such as technical specifications) that serve as quality proxies in consumers’ quality judgments and purchase decisions. The assessment of quality, broadly defined, is a fundamental aspect of consumer decision making. Indeed, going back at least to the 1960s, a main topic in consumer research revolved around consumers’ reliance on intrinsic and extrinsic quality cues (for a review, see, e.g., Bettman, 1979; Zeithaml, 1988). For example, one study (Allison and Uhl, 1964) demonstrated that judgments of the taste of beer are influenced by brand names. Other extrinsic cues that received a great deal of attention include, for example, price, store image, and country-of-origin. Intrinsic cues, such as the color and features of a product, received some attention as well. As indicated, the current environment has introduced highly accessible, diagnostic sources of information about product quality, potentially making extrinsic, often inaccurate cues less influential. In particular:

i. There is probably nothing that is a purer representation of the meaning and power of marketing than branding. Although brands have multiple important functions (e.g., Keller, 2003), quality signaling may be the most important. But such a quality proxy has obvious limitations, because both good and bad products often share the same brand name. The current information environment makes it easier for consumers to assess the quality (or “absolute value”; see Simonson and Rosen, 2014) of products, potentially making brands less important. However, such a generalization is contingent on various factors pertaining to the category, the manner in which decisions are made, the other functions of brands (e.g., communicating status), and individual differences.

ii. The impact of brand loyalty — a consumer’s tendency to prefer and repurchase a particular brand — is another important consumer decision making dimension that might have fundamentally changed. The hypothesis (e.g., Simonson and Rosen, 2014) is that better information about the quality of individual products decreases the impact of prior
brand experience and thus loyalty, though such an effect likely interacts with various situational and individual difference factors.

iii. For similar reasons, consumer researchers can examine changes in the roles of other quality proxies such as price, country-of-origin, and store image.

The impact of emotions in the presence of easily accessible, diagnostic “rational” information

Much of the newly available information on the Internet and, to a lesser extent, social media, is “rational” in nature; although some reviews, especially from friends, include affective aspects, the information environment is particularly conducive to “harder” dimensions such as specifications, performance ratings, feature descriptions, product demonstrations, product use and fit, prices, and so on. It is reasonable to expect that information availability and accessibility are positively correlated with information use. Assuming the amount of inputs influencing judgments and decisions is limited and/or quantity of information is correlated with decision impact, the abundant rational information may diminish the impact of more affective inputs.

The impact of prior beliefs and attitudes on purchase decisions

Along the same lines, a basic hypothesis that can be examined is that the use of information sources when making decisions reflects a zero-sum process. That is, a growing impact of one source (e.g., reviews) must correspond to a decline in the decision impact of other sources. Accordingly, the growing consumer reliance on information from others (including strangers, friends, and experts) at the time purchase decisions are made suggests that the reliance on prior knowledge, attitudes, and beliefs stored in memory is declining. Although such a general conclusion is too all-encompassing and may not be testable, researchers can study conditions and individual differences that moderate the relations between exposure to information from others at the point of purchase and the level and nature of reliance on stored information, beliefs, and attitudes.

Reconceptualizing customer satisfaction

The ability to better predict product/service experience quality (e.g., the quality of food at a new restaurant) is likely to have a systematic influence on the resulting product/service satisfaction and the magnitude of any discrepancy between expectations and realized experience. In particular, the average magnitude of expectation-experience gaps might decline. Furthermore, whereas, in
the past, expectations were often vague, even nonexistent, or constructed after experience, higher accessibility and diagnosticity of information about expected experience may actually make the classic expectation-disconfirmation model more relevant. These and other questions pertaining to our understanding and to the modeling of customer satisfaction can be reexamined in future research.

Drivers of the adoption of innovations

Although the subject of adoption and diffusion of innovations has received less attention in recent decades in the consumer behavior field, it remains central to consumer behavior and marketing. In addition to the accessibility of a great deal of information about new products (e.g., various new “wearables” such as activity trackers) and the speed at which product information disseminates, the types of information available and the media that are now available for observing product demonstrations, obtaining usage instructions, and so on may very well change the relative significance of the long-established diffusion drivers. In particular, the classic adoption drivers (for a review, see Rogers, 2003), such as communicability, observability, and compatibility, might play a very different role in the current environment compared to the environment (e.g., farmers in Iowa) that inspired the current innovation adoption theory. For example, YouTube and other media make it much easier to observe and understand newly introduced products. Additional adoption drivers that moderate the consumers’ acceptance of innovations may be identified. Future research may examine the conditions and individual differences that interact with the relative weights of different adoption drivers.

The innovation adoption process

Relatedly, the classic adoption process needs to be reexamined. For example, does imitation play today the same role that it did when current adoption of innovation theory was developed (see, e.g., Bass, 1969; Rogers, 2003)? What are the roles of social media in the imitation process? Is it still meaningful to think in terms of “Crossing the Chasm” (Moore, 1991) with “Bowling Alleys” from early adopters to the early majority? Answering these questions may call for collaboration among behavioral JDM researchers and empirical-quantitative researchers.

The innovation adopter segments

A closely related research question refers to the classic classification of adopter segments (innovators, early adopters, etc.). The adopter segments have been defined based largely on demographic and psychographic characteristics
(e.g., Rogers, 2003), such as age, education, inherent innovativeness, and risk tolerance. One would expect that at least some of the factors that affect the tendency to adopt innovations interact with the diagnosticity and accessibility of information about the innovations. Future research may examine whether specific features of the current information environment interact with adoption segments and drivers, or whether the old principles and segments still apply regardless of the information conditions.

**The processing and impact of user reviews**

User and expert reviews, despite their limitations, often represent the most reliable and most accessible predictors of product quality and user experience. The impact of reviews in the presence of familiar quality proxies such as brand name, price, and loyalty, raises interesting questions. For example, under what conditions do reviews overshadow other quality cues, when are they ignored, and when do they serve as mere justifications for decisions driven by brands, loyalty, and/or other extrinsic proxies? How do conflicting reviews affect preference confidence, purchase likelihood, and the depth of information search? Also, what reviewers’ characteristics (such as “clout” — the number of previous reviews by the same reviewer) affect their perceived credibility and impact? Furthermore, it appears that there are wide differences among consumers in terms of their trust in reviews and the role, if any, reviews play in their decision process. Although there has already been a great deal of research about a range of questions related to user reviews, reviews can fundamentally change decision processes and the role of traditional marketing tools such as brands and loyalty. The available secondary and other (big and small) data sources, now also including content measures, provide new research tools and opportunities.

**Reexamining the set of decision rules that consumers employ**

We might also revisit the set of decision rules consumers might and actually employ when making purchase decisions and other choices (e.g., Bettman, 1979). The traditional decision rules (e.g., weighted additive, conjunctive, lexicographic) envision a matrix consisting of a set of options and their attribute values. While certain online marketers do present their portfolio of models in exactly that way, brand-attribute matrices are much less relevant with respect to the haphazard, unpredictable, associative search and evaluation processes that characterize many online purchase decisions. Furthermore, the value of thinking in terms of “decision rules” may be debated. Perhaps the more relevant issue revolves around the sequence of options to consider and the conditions that cause a shopper to stop searching, decide to make a purchase, “put an
item in the cart,” and execute the purchase decision. Although some research in this area has already been done, it is another rich topic that deserves further study.

Social media and social influence

A great deal has been written about the importance of social media for brand and loyalty building. Since social media include a variety of unique platforms, what applies to one medium may not apply to another. But beyond such differences, it appears that the belief in the impact of social media as it relates to purchase decisions has not yet been thoroughly studied, and it may be overestimated at this time. For one thing, social media inputs (e.g., a friend announcing that s/he likes Brand Y) are typically not seen at the time and point of purchase, in contrast to stranger review posts that are often accessed closer to the time of purchase. Furthermore, researchers might examine the interaction among specific forms of social media, the characteristics of their users, and/or the conditions under which they affect particular consumer decisions. More generally, the role of social media alongside other sources of information calls for a comprehensive framework for understanding the interactions among competing information sources.

A reevaluation of negativity and positivity biases

Prior research has examined the conditions under which negative or positive inputs tend to have great impact on evaluations (e.g., Kanouse, 1984; Mizerski, 1982). One of the factors believed to make the negativity bias more pronounced was the relative scarcity of negative evaluations (whereas marketers provided sufficient quantity of positive, if less credible, positive evaluations). The Internet has changed the product evaluation valence balance, and negative (as well as positive) evaluations are plentiful and easily accessible. This calls for a reexamination of the prevalence of negativity bias and, more importantly, moderators of negativity and positivity biases. Furthermore, it is interesting to examine how the availability of many positive and negative reviews affects decision confidence and procrastination.

Predicting consumer preferences and a reevaluation of the roles of market research

Decision and marketing researchers have developed various models that rely on measurement of preferences at one time to predict decisions made subsequently, such as the decision to try a new product or concept (e.g., conjoint measurement). The effectiveness of traditional market research, which measures current preferences and perceptions to predict future choices, has
declined given the growing impact of information from other sources that are accessed just before purchase decisions are made. Moreover, the errors associated with making wide-reaching predictions based on a small subset of the attributes and factors that consumers consider in today’s marketplace (i.e., “focalism bias”) have become more severe, making such studies less reliable.

At the same time, the range and size of big and small data about what consumers do and say in real time have never been greater. In addition to secondary data sources, it is much easier to run an experiment, revise it, followed by the next experiment. Accordingly, market research, and relatedly academic research using marketplace data, will certainly continue to have important roles and applications. However, the questions investigated using market research will likely change, to a large degree under the influence of what can be done using the new data sources and possibilities. Consumer researchers could test, for example, the effectiveness of alternative preference measures and their interaction with the applicable decision processes and the available information sources.

**Consumer decision making as a driver of the evolving information environment**

The topics listed so far focus on the impact of the evolving information environment on consumer decision making. But there is little doubt that the evolution of the information environment is largely shaped by characteristics of consumer decision making. A straightforward example is the manner in which consumers’ limited attention span and cognitive capacity as well as susceptibility to what is salient shape marketers’ information presentation format and provided tools (e.g., recommendations, sorting mechanisms). There is no reason to assume that marketers and other Internet information providers always “get it right.” But one would expect marketers and public policy makers to try to structure the provided information in ways that (a) help the promoted product, service, or opinion, (b) make it easier to form preferences, and possibly (c) is conducive to making better decisions. Relatedly, Sunstein and Thaler (2008) and others have discussed the use of nudges (or choice architecture) to improve and/or influence decision making. Thus, a broad research opportunity refers to the study of the effect of consumer decision making on the shape and features of the information environment as well as ways to make the environment more responsive and conducive to effective decision making.

**Consumer decision making as a new JDM frontier**

It may sound overstated, but as indicated, I believe that the current technology and information environment have turned consumer JDM into a
laboratory where some of the most innovative decision making concepts and tools are introduced and can be tested. No other domain that I can think of offers a comparable rate of change and range of new JDM concepts and, as proposed above, many of these new ideas raise interesting conceptual questions that can lead to new frameworks and understanding of JDM more generally. To use one illustration, consider the manner in which consumers predict and define the quality of products. The Internet environment provides a laboratory for studying this question. For example, an increasingly popular service called GoodGuide, which was started by a University of California, Berkeley professor, currently provides easy access to ratings (on 1–10 scales) of the health, safety, environmental impact, and/or social responsibility associated with a wide range of products such as refrigerators and shampoos. It is reasonable to assume that few consumers previously considered these dimensions before such information became easily accessible. It is quite possible that most consumers will not pay much attention to such information even if it is readily available. But for those who do consider these ratings, it will be interesting to study the manner in which such information is incorporated in assessments of quality and influences the decision making process and outcome. Various other questions arise regarding the impact of new types of information that become available, which might be studied in realistic online and offline settings.

The list of potentially important research questions pertaining to the interaction between the changing information environment and consumer decision making is much longer than the directions identified above, but these illustrative topics make it clear that much of the marketing and consumer behavior textbook content needs to be reexamined. Compared to prior BDT research, the proposed research area puts less emphasis on discovering anomalous behavior and more on phenomena and contributing factors pertaining to the impact of the current environment on decision making. Furthermore, the proposed research area calls for greater emphasis on studies of process, compared with the previous BDT agenda targeting normative theories.

The topics outlined above and, more generally, the opportunities opened by the proposed research area and the need to reexamine old frameworks of consumer decision making are all quite broad and potentially important. Furthermore, they meet a key requirement for a good behavioral marketing dissertation topic — they raise interesting conceptual issues and have straightforward marketing and often policy implications.

**Broadening the Range of the JDM Research Toolkit: External Validity and Secondary Data Skills**

Although carefully controlled experiments will likely continue to serve as the main research method, studying the topics outlined above may require additional research skills and a closer collaboration with quantitative researchers.
in marketing. A reevaluation of consumer decision making in the changing information environment means that pertinent characteristics of the environment must be sufficiently well captured in studies. Although laboratory studies may be better at testing explanations and underlying processes, real world observations of the studied behaviors and patterns will often be an essential and possibly initial step.

This conclusion means that external validity is more important than it might have been when researchers focused on all-purpose JDM topics (e.g., establishing the construction of preferences) and relied on minimalist tests (e.g., the effect of adding option C to A and B). Not to downplay the importance of internal validity and ruling out rival accounts, but even more than before, tradeoffs between the two types of validity will come to the fore, with some studies emphasizing external validity even if these investigations do not meet some internal validity standards. Over time, different studies will complement each other and allow us to reach conclusions that are supported by methods with complementary strengths.

In the early 1980s, JCR published a debate that, among several related topics, discussed the conditions under which researchers should be concerned about external validity. Lynch (1982) pointed out that a researcher should be particularly concerned about external validity of theoretical tests when there are “background variables that normally interact with the manipulated independent variables.” Although the current information environment certainly does not interact with every variable or individual difference, there is a reasonable basis for expecting that such interactions often play a significant role. Indeed, the research direction proposed above is premised on the expectation that the changes in the environment call for a reexamination of key aspects of consumer decision making and, consequently, marketing.

Arguably, studies that excel on the external validity dimension should be allowed to meet lower (within a reasonable range) internal validity standards. It is noteworthy that there has already been a growing emphasis on external validity, in part because new data types have become available. However, the trend has been much more pronounced in quantitative marketing journals than in behavioral journals, where few compromises are allowed with respect to internal validity and ruling out rival accounts.

Studies and data that rate highly on external validity often cannot rule out all viable alternative explanations. But the field, as represented by journal editors and reviewers, may be better off being more lenient when evaluating studies that present potentially important findings, even if it is impossible to rule out some rival accounts. Additional studies can then investigate the presented result and its theoretical implications. Although the final conclusion may be that the original interpretation of the high external validity data was incorrect, such investigations may nonetheless lead to new insights and research ideas.
Using secondary data sources often requires skills that behavioral researchers in marketing lack. In particular, such investigations often require some proficiency in econometric and modeling techniques and the ability to work with much bigger data sets than the typical experimental results. Most behavioral marketing and psychology doctoral programs do not require taking courses in econometrics. To the extent that we expect behavioral investigations to require stronger econometrics and statistics skills, there are at least two non-mutually exclusive solutions. We can revise doctoral programs such that (also behavioral) students will be required to take more advanced econometrics and statistics courses. In addition, collaborations between behavioral and quantitative researchers in marketing need to receive higher priority. Collaboration between behavioral and quantitative marketing researchers, albeit in limited areas, has existed for a long time, for example, in the context of scanner data-based projects (e.g., Hardie et al., 1993; Simonson and Winer, 1992). However, the above proposed research area and new types of big and small data that have become available will require and can benefit from a higher degree and more frequent collaboration, with each researcher type contributing different skills.

Obstacles on the Way to Adopting a Marketing-Centric JDM Agenda

The above list of research topics illustrates the research questions raised by the current information environment. These topics pertain to fundamental aspects of consumer behavior and marketing as well as to decision making more generally. But as noted already, it is far from obvious that consumer JDM researchers will be receptive to shifting more of their research agenda to such marketing topics and to marketing journals. In this section, I further discuss and opine on obstacles on the way to a marketing focus by consumer BDT–JDM researchers.

First, however, one obstacle that, in my view, does not exist is a large discrepancy between the current “excitement” in the broader JDM and social psychology literatures compared to the consumer behavior field. Others may disagree, but in my assessment the JDM field has seen better days in terms of the rate and significance of advances in our understanding of judgment and decision making. It may not be meaningful to make generalizations about currently published general-purpose JDM research — some articles are more interesting and important than others and research tastes differ. But it appears that the JDM topics of today tend to be narrower and more incremental than the JDM topics of 20–40 years ago. In particular, many of today’s topics are extensions or applications of previous findings, such as new insights into heuristics and biases or priming. The nth article on overconfidence, the decoy
effect, intertemporal preferences, or the representation of gambles is likely to make a smaller conceptual contribution than earlier articles on these topics. In other words, at the risk of overgeneralizing based on my personal taste (and age), there appear to be fewer big and exciting new JDM topics.

As indicated, the most interesting and vibrant current JDM research area has involved public policy applications of prior JDM findings (e.g., Sunstein and Thaler, 2008), relating to problems such as obesity, financial decision making, and keeping urinal surroundings clean with the help of a well-positioned fly. The topics that fall in this domain are certainly important and have significant practical implications, which make the JDM field more relevant to real world, society problems than it has been in the past. However, practical significance aside, this area is based largely on applications of already well-established concepts, such as defaults, precommitments, framing, and mere salience. But as far as new conceptual ideas and discoveries are concerned, as I see it, the JDM field has been in decline compared to earlier decades.

By comparison, consider an article about the impact of the Internet decision environment on the size, composition, and timing of consumers’ consideration sets or the impact of consumer choice strategies on the design of the information environment. Although these too are important topics, the scholarly target audience is likely to be narrower. The likelihood of publishing such an article in a top psychology journal is slim, though it might get published (and receive limited attention) in a JDM-dedicated journal such as the Journal of Behavioral Decision Making. Many JDM researchers, especially those who received their education in psychology, are likely to prefer to play in the “big leagues.” It is true that an important finding of general interest has a better chance of reaching a broad audience if published in broader, nonmarketing journals, especially if the author is not a widely followed researcher.

Overall, while research tastes certainly vary, I believe that factors that limit the commitment of JDM–BDT researchers to marketing are less related to the conceptual limitations of this area. A reluctance to commit to marketing may have more to do with the reference community that researchers came from (i.e., where they received their Ph.D.) and the perception of some that publishing about marketing topics is like playing in a lower league. This perception is not unique to marketing, and it reflects the lower perceived status in some academic circles of applied fields.

But this is starting to change. Not too long ago graduates of psychology Ph.D. programs saw a move to a business school as a step down. However, as we have witnessed in the Marketing and Organizational Behavior areas of business schools, a growing percentage of the behavioral faculty have joined these areas from psychology (with many economists joining the quantitative side of marketing).

In conclusion, the consumer BDT community has much to be proud of, but its most prominent purpose has been largely achieved and many of the
leftover topics tend, in my opinion, to be less important than the topics studied in the earlier days of the field. The BDT community in marketing may dissolve, with each researcher pursuing his or her current interests in JDM, social psychology, and consumer behavior. In fact, considering that no coordination or shared mission is needed for that option, this is the most likely outcome. I proposed a particular alternative direction, which focuses on the current research opportunities in the consumer and marketing field. The new information environment has introduced many important and conceptually interesting questions that could fit well with the skills acquired by researchers working on the BDT project. This new direction requires some new skills but, more important, it requires a greater commitment and a somewhat revised research identity.

References


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