

Conceptual Consumption

Dan Ariely¹ and Michael I. Norton²

¹Duke University, Durham, North Carolina 27708; email: dandan@duke.edu

²Harvard Business School, Boston, Massachusetts 02163; email: mnorton@hbs.edu

Annu. Rev. Psychol. 2009.60:475-99

First published online as a Review in Advance on September 2, 2008

The *Annual Review of Psychology* is online at psych.annualreviews.org

This article's doi:
10.1146/annurev.psych.60.110707.163536

Copyright © 2009 by Annual Reviews.
All rights reserved

0066-4308/09/0110-0475\$20.00

Key Words

consumer behavior, expectancies, goals, fluency, regulatory fit

Abstract

As technology has simplified meeting basic needs, humans have cultivated increasingly psychological avenues for occupying their consumption energies, moving from consuming food to consuming concepts; we propose that consideration of such “conceptual consumption” is essential for understanding human consumption. We first review how four classes of conceptual consumption—consuming expectancies, goals, fluency, and regulatory fit—impact physical consumption. Next, we benchmark the power of conceptual consumption against physical consumption, reviewing research in which people forgo positive physical consumption—and even choose negative physical consumption—in order to engage in conceptual consumption. Finally, we outline how conceptual consumption informs research examining both preference formation and virtual consumption, and how it may be used to augment efforts to enhance consumer welfare.

Contents

INTRODUCTION	476
OVERVIEW	478
PART I: CONSUMING	
CONCEPTS	478
Consuming Expectancies	478
PART II: SACRIFICING PHYSICAL	
CONSUMPTION FOR	
CONCEPTUAL	
CONSUMPTION	483
Forgoing Positive Consumption	484
Choosing Negative Consumption ...	487
CONCLUSIONS AND FUTURE	
DIRECTIONS	
Conceptual Consumption Over	
Time: Inferring Preferences	
from Actions	489
Virtual Consumption as	
Conceptual Consumption	490
Conceptual Consumption and	
“Improved” Consumer	
Behavior	491

INTRODUCTION

Although consumption is fundamental to all forms of life, human consumption is extraordinary in its variety and sheer inventiveness. Some physical consumption, such as food and water, is essential for basic survival and thus shared with other organisms, but humans are remarkable in the scale of consumption over and above meeting basic needs, and indeed in the way that even “basic” consumption is embellished and elaborated—consider, for example, the sheer number of brands of bottled water. The centrality of consumption is not unique to the modern age, of course, nor is it unique to humans. Animals spend much of their time searching for food and consuming it; similarly, our ancestors spent much of their time foraging for, preparing, and consuming food (Kaplan 2000, Sahlins 1972). With modern technology, however, the nature of consumption has changed: Whereas our ancestors needed a minimum of some 15–20 hours per week to gather and prepare food,

the current U.S. consumer can accomplish the same tasks with one 30-minute trip to a supermarket per week and 30 minutes per day preparing meals, thanks to innovations such as microwave ovens and instant meals.

But how do humans use this additional time? One avenue that humans clearly pursue is overconsumption of food; having evolved in an environment where food was both scarce and unpredictable such that eating to our physical limit when food was available was a dominant strategy, continuing to apply this rule mindlessly when food is abundant underlies modern obesity epidemics (Pinel et al. 2000, Wansink 2006). In addition to hunger for food and thirst for water shared with other animals, however, humans use this additional time to address their unique—and seemingly—insatiable appetite for consumption of information, so much so that Schelling (1984) famously called the mind a “consuming organ,” and Borgmann (2000) wrote that “to live is to consume.” The staggering amount of time people spend reading blogs about celebrities attests to this appetite; more broadly, evidence can be found in human desires for stories (originally through oral storytelling, and increasingly through books and movies), for rumors and gossip, for news, for cultural memes, and so on (see Allport & Postman 1947, Dawkins 1976, Heath et al. 2001, Sinaceur & Heath 2005). Thus, in some sense people have switched from consuming food (foraging for nuts) to consuming ideas (foraging for information in blogs). Although not a literal one-to-one exchange of consumption of food for consumption of ideas, we suggest a basic property of human consumption: As basic needs are met with greater ease and celerity, humans find a wide variety of increasingly psychological avenues for quenching their consumption thirst. Even the labor with which humans have replaced hunting and foraging is telling, as countries transition from manufacturing to knowledge economies (Drucker 1959), where both the production and consumption of ideas are paramount. Shirky (2008), for example, has noted that whereas Americans spend some 200 billion hours per

year watching television, Wikipedia—the online dictionary whose intellectual content is generated entirely by unpaid contributors—now represents roughly 100 million hours of human thought, a novel and promising use of excess consumption energy.

In fact, we suggest that the desire for consuming information in these forms (stories, blogs, and so on) merely scratches the surface of the fundamental role that ideas and concepts play in the consumption experience, and that a large portion of human consumption can be better understood by considering “conceptual consumption,” psychological consumption that can occur independent of, and in some cases can even trump, physical consumption. As sociologists and anthropologists in the field of consumer behavior have pointed out for many years, physical consumption (of consumer products, of brands) is used not just to satisfy basic needs but also to signal to ourselves and others our beliefs, attitudes, and social identities (e.g., Belk 1988, Fournier 1998, Hirschman & Holbrook 1982, Holbrook & Hirschman 1982, Holt 1995, Mick 1986). Thus, although one view of consumption divides consumption into consuming the physical (food, water) compared with consuming the psychological (ideas, information), the sociological/anthropological view suggests that this division may be artificial: Conceptual consumption is implicated in even the most basic consumption acts, such as eating or drinking, and is therefore paramount.

Take the deceptively simple case of the decision to eat a chocolate chip cookie. Certainly, because the cookie counts as food, we could analyze the decision from a physical consumption standpoint, measuring the cookie’s fat content and nutritional value (Berthoud & Morrison 2008). We could also analyze the decision from a marketer’s perspective, by examining how willingness to pay varied as a function of the number of chocolate chips in the cookie, or its size, or its placement on a shelf. Both of these approaches, of course, are fruitful in understanding the consumption act. Our concern, however, is with the psychology behind the consumption act, the surprisingly complicated na-

ture of the conceptual consumption underlying even such seemingly simple physical consumption decisions.

Compare and contrast the decision to consume a cookie from the perspective of a dog or a human. From our experience with canines, the dog’s psychology with regard to the cookie goes something like, “Yes,” followed one second later by immediate consumption of the cookie. Contrast this to the human psychology of eating the cookie. Faced with a cookie on a plate, humans might think, “How many cookies have I had today?” “How does eating this cookie jibe with my weekly goal to lose two pounds?” “What will my coworkers think if I take the last cookie?” “I wonder if this cookie is organic?” “And if it is organic, is it even worth eating?” “Are any of the ingredients in this cookie produced by exploited third-world workers?” and so on. Indeed, the extraordinary human capacity for mental simulation of both past and future events (Gilbert & Wilson 2007, Kahneman & Miller 1986, et al. 2008, Roese 1997, Taylor et al. 1998, Tulving 2002) and general proclivity for mind-wandering (Mason et al. 2007, Smallwood & Schooler 2006) suggests that the potential list of questions may well be endless.

In this example, notice that regardless of the questions the consumer asks—the concepts brought to mind—the physical consumption object (the cookie) remains exactly the same; conceptual consumption, on the other hand, will be markedly different depending on whether consumers are thinking about a goal to lose weight compared with a desire to promote fair labor practices. In the current review, we explore the interactions between physical and conceptual consumption, outlining and providing representative research examples of what experimentalists in consumer behavior have learned about the psychological aspects of consumption. In doing so, we also attempt to provide a framework for thinking about what the study of consumer behavior is and is not to a field that continually seeks to differentiate itself from related disciplines such as psychology and economics, and even to differentiate how research in consumer behavior differs from

marketing research (Deighton 2007, Loken 2006, Mick 2003, Simonson et al. 2001). We suggest that consumer behavior is fundamentally and increasingly the study of conceptual consumption, broadly defined across many domains of consumption.

OVERVIEW

The bulk of this review is divided into two parts. In Part I, we consider several streams of literature that have received attention from consumer behavior researchers that we feel best demonstrate people's desire to consume concepts: the impact of expectancies, goals, fluency, and regulatory fit on physical consumption. In Part II, we then explore the relative strength of conceptual consumption compared with physical consumption, finding cases in which the desire to consume concepts trumps the desire to engage in physical consumption even when that physical consumption offers utility, exploring cases in which people forgo positive physical consumption to consume a concept, and even more puzzling, cases in which they choose negative physical consumption. Finally, we end by outlining the potential for a better understanding of conceptual consumption to contribute to three areas of research: preference formation and perpetuation, virtual and online consumption, and research focused on increasing consumer welfare by improving people's consumption decisions.

PART I: CONSUMING CONCEPTS

In this first section, our goal is to outline several different classes of conceptual consumption. Our goal is not to be exhaustive—there are many more concepts that people consume than those we review below—but we have selected four that have received attention recently in consumer behavior as a jumping off point: expectancies, goals, fluency, and regulatory fit. For each concept, we provide a brief review of the existing research—we encourage readers to look elsewhere for more comprehensive reviews of these topics—and then describe in

greater detail specific investigations that we feel highlight a unique aspect of conceptual consumption. In particular, we focus on research that holds physical consumption constant, and varies only the concepts available for consumption, to demonstrate an independent role for consuming concepts in determining the utility of an experience over and above utility from physical consumption.

Consuming Expectancies

One of the concepts that has received the most attention in consumer behavior for its impact on consumption is how people's expectations influence and alter their consumption, even holding the physical consumption object constant. Indeed, one of the classic studies in consumer behavior (Allison & Uhl 1964) is at heart a study about expectancies: Consumers who drank beer with visible brands saw those beers as highly variable in their taste and preferred beers with their favorite brand label, whereas consumers who drank unbranded beers tended to rate them all as tasting similar to each other. Thus, expectations set by associations with advertising and branding can influence and sometimes supersede physical consumption of both products and services (Boulding et al. 1993, 1999; Braun 1999; Kopalle & Lehmann 2001, 2006; Nevid 1981; Wansink & Chandon 2006). Because people tend to seek confirmation for their beliefs (Lord et al. 1979, Snyder & Swann 1978), expectations can guide perception and shape behavior; the impact of expectancies on perception has been documented in many domains (for a review, see Fiske & Taylor 2008), including demonstrations of stereotypes influencing perceptions of individuals (Darley & Gross 1983, Klein & Snyder 2003, Norton et al. 2004), of expectancies of humor influencing people's enjoyment of cartoons (Wilson et al. 1989), of the spin doctoring of political consultants influencing perceptions of politicians' performances in televised debates (Norton & Goethals 2004), and of the influence of health information on the enjoyment of food (Levin & Gaeth 1988, Wansink et al.

2000). In addition, expectancies seem to have a life of their own; merely stating that one expects to engage in some behavior can increase the likelihood of performing it (Fitzsimons & Morwitz 1996, Greenwald et al. 1987, Morwitz et al. 1993).

In one recent investigation, Lee et al. (2006) asked patrons of a pub to drink a small glass of a commercially available beer and a small glass of their own “MIT brew,” which consisted of the same beer with the addition of one ingredient—balsamic vinegar. They asked people to sample the two beers and to choose which they wanted a full glass of, but they varied when they told participants about the secret ingredient. One-third of the participants were never told about the balsamic vinegar, another third were told up front about the balsamic vinegar, and the final third first tested the two beers without knowing anything about the vinegar (as in the first condition) but then were told about the vinegar prior to making their choice. Thus, the final group knew about the balsamic vinegar but learned about it only after the tasting experience itself ended. The results showed that the timing of disclosure of the secret ingredient significantly affected people’s preference for the MIT brew compared to a regular beer. The beer with balsamic vinegar was perceived to be repulsive only when that disclosure preceded drinking the beer. This difference suggests that concepts are not just an additional input for decisions, but that conceptual consumption can actually change the physical consumption experience itself: When people learned that the MIT brew had vinegar after drinking it, they liked the beer just fine, but when they expected the MIT brew to be bad (when they knew about the vinegar up front), they thought the beer was bad.

Indeed, the impact of expectancies on consumption is powerful enough that changing conceptual consumption can affect physical consumption at a level that can be observed in brain imaging studies, evidence that expectancies offer utility independent of physical consumption. McClure et al. (2004), for example, asked participants who preferred Coke to Pepsi

to drink Coke and Pepsi when they knew what drink they were about to consume and when they did not; participants preferred Coke, but only when they knew it was Coke. This finding suggests that controlling for physical consumption, the conceptual consumption made possible by brand associations had an impact over and above the utility of Coke itself. Most interestingly, McClure et al. (2004) conducted this study while participants were scanned using functional magnetic resonance imaging, and analyses revealed that these preferences were reflected by recruitment of brain regions associated with the processing of reward, offering evidence for the deep impact of concepts on physical consumption. In a similar investigation that utilized the well-documented consumer inference that price serves as a signal of product quality (Rao & Monroe 1989; though see Gerstner 1985), Plassmann et al. (2008) asked participants to taste one wine several times but told them that they were actually sampling different wines; across trials, they told participants that the wine they were about to taste was cheap or expensive. Offering converging evidence with McClure et al. (2004), Plassmann et al. (2008) found that consumption of “higher-priced” wines was related to greater recruitment of reward circuitry; once again, controlling for physical consumption, conceptual consumption affected experienced utility.

Expectancies can be so powerful that they can influence not just perception and internal experiences but also external events through what Merton (1948) termed “self-fulfilling prophecies,” and these prophecies can occur without conscious awareness (Chen & Bargh 1997). Males who believe that a woman with whom they are interacting is attractive elicit greater sociability from her (Snyder et al. 1977), students perform better if their teachers are led to believe that they are late bloomers (Jussim & Harber 2005, Rosenthal & Jacobson 1968), and parents’ erroneous beliefs about their children’s drinking habits come to shape how much their children drink (Madon et al. 2003).

One of the most compelling demonstrations of the impact of self-fulfilling prophecies in the

domain of consumer behavior is in the domain of placebo effects, an area of research that has received increasing attention in the medical literature (Price et al. 2008). Shiv et al. (2005) asked students to engage in mental tasks such as solving puzzles, but allowed participants to purchase energy drinks before the task began. Some participants purchased the drink at full price, while others were given the opportunity to buy the drink at a discount. Participants who bought the drink at a discount subsequently performed worse on the task. These results extended beyond the laboratory as well: In a field study, Shiv et al. (2005) showed that people who had caught colds rated their cold remedies as more effective if they had paid full price for them. Another investigation demonstrated similar placebo effects for a pill purported to relieve pain: Participants who were told the pill had been discounted were unable to tolerate as much physical pain as those who were told the pill was not discounted (Waber et al. 2008). In a related investigation, Irmak et al. (2005) showed that people's desire for treatments to work influences the effectiveness of placebos.

Taken together, these studies on expectancies suggest that preconceptions and ideas about consumption can act to modify the physical consumption experience itself. As the MIT Brew, Coke, and placebo examples illustrate, higher-order mental processes are deeply implicated in even the simplest of experiences (tasting beer, drinking Coke, and taking cold medication), making conceptual consumption an integral part of any physical consumption.

Consuming goals. Recent years have seen a large increase in research exploring the nature and function of goals in psychology and consumer behavior (Bagozzi & Dholakia 1999, Baumgartner & Pieters 2008), with investigations of factors that influence goal completion—such as setting deadlines (Ariely & Wertenbroch 2002) or coping with distractions (Fishbach et al. 2003)—as well as research exploring how people manage conflicting goals (Fishbach & Dhar 2005). There is little doubt that goal setting serves as a strong motivator

for humans; researchers have demonstrated the power of goals in shaping behavior in countless domains, from relationships with others (Chartrand et al. 2007, Fitzsimons & Bargh 2003) to prosocial behavior (Nelson & Norton 2005, Trötschel & Gollwitzer 2007) to weight loss (Bagozzi & Edwards 1998). Indeed, people are willing to overcome obstacles to meet goals, returning to tasks relevant to a desired goal when such goal-directed behavior is interrupted (Bargh et al. 2001), and goals are even contagious, spreading from one person to another with relative ease (Aarts et al. 2004).

Gollwitzer (1990, 1999) introduced the concept of implementation intentions, or how goals lead people to behave in ways consistent with those goals. When an individual decides on 40 push-ups as part of a new exercise regimen, they then treat that number as a reference point, leading to increased effort as they approach that number (in line with having implementation intentions to reach that goal) but a rapid drop-off after that point (Heath et al. 1999). In this case, of course, the individual has set this goal herself, and 40 push-ups may have some real meaning in that it is an appropriate level for which to aim. But what about cases in which researchers set goals? The research reviewed above suggests that experimentally induced goals have a powerful impact on human behavior; in one recent investigation, people's choices for tasks were dramatically impacted by the number of "points" those tasks offered—even when the points in fact had no value (Hsee et al. 2003).

We are particularly interested in how a goal can come to serve not as a motivator to engage in some desired behavior, but, ironically, as a goal in and of itself. In other words, we explore cases in which goals serve as concepts that humans wish to consume, leading goals to supersede physical consumption. Below, we describe three investigations that demonstrate goal consumption, two in which the desire to consume a goal leads to increased physical consumption, and one in which goal consumption leads to decreased physical consumption.

In a field study, Nunes & Dreze (2006) demonstrated how making salient a goal to

complete a task can increase consumption of a good. They gave 300 loyalty cards to customers of a car wash. For half of the customers, the cards required ten additional purchases in order to receive a free car wash, but the researchers kindly affixed two stickers as a head start; for the other customers, the cards required eight purchases to obtain the free car wash, but no stickers were already attached. Thus, in both conditions, customers needed to pay for eight additional car washes to receive a free wash, but in the first condition, they were endowed with the illusion of progress toward that goal. When the researchers counted how many cards were redeemed, they found that nearly twice as many customers paid for the additional eight washes and redeemed their card when they had been given two stickers. Given that the price of eight car washes is the same for customers in each condition, those customers endowed with progress toward a goal therefore spent much more money at the car wash than those for whom this goal was not made salient. Because the car washes were all of similar quality, this suggests that consuming the goal offered these participants additional utility over and above consuming the physical product. Kivetz et al. (2006) demonstrated similar results for consumers completing loyalty cards at coffee shops. Indeed, by this reckoning, one reason that sunk costs are so difficult to let “sink” (Arkes & Blumer 1985, Staw 1981) may be that initial investment sets in motion a goal to complete the underlying task, and giving up the opportunity to consume that goal at the task’s completion creates too much disutility.

But are such desires to complete tasks specifically related to consuming a goal? A related study suggests this may be the case, providing direct evidence of increased physical consumption driven by the desire to complete a relevant goal. Dhar et al. (2007) gave participants in one study the opportunity to buy a 7-rupee keychain; before considering that purchase, however, some participants were given the opportunity to buy a desirable CD while others were given the opportunity to buy a somewhat less exciting light bulb. Because more

participants bought the CD than the light bulb, more of the individuals who had the opportunity to buy the CD subsequently bought the keychain, demonstrating “shopping momentum.” Indeed, regardless of whether the first purchase was of a light bulb or a CD, participants were more likely to buy the keychain as long as they had simply purchased something before receiving the 7-rupee-keychain offer. Most important for our account, these purchases were driven by goal-related cognitions; initial purchases caused participants to shift to an implemental mindset (Gollwitzer 1990), which spurred subsequent purchases. Note that in all cases, participants were faced with the same physical consumption decision: a 7-rupee keychain. When purchasing goals were active, however, participants acted as though that keychain was more valuable, suggesting—in line with our account—that completing the goal, and thus consuming that concept, was the driver of their behavior. Indeed, other research demonstrates that merely considering whether or not to buy an item promotes a purchasing mindset that induces subsequent purchasing (Xu & Wyer 2007), suggesting the ease with which the desire to consume goals may be instantiated.

The above examples, however, all suggest that the desire to consume goals also leads to increased physical consumption. Our account suggests that the desire to consume concepts is separable from the desire to consume things and that it can therefore decrease physical consumption as well. Evidence for such a claim would come from data showing that the desire to consume a completed goal can reduce people’s typical physical consumption behavior. Lee & Ariely (2006), in an investigation of consumer responses to promotional coupons, demonstrate just this. In a series of field studies at a convenience store where the average total purchase was \$4, they gave customers conditional coupons of the form: “spend \$X or more and get \$Y off.” Some customers received a coupon that offered \$1 off any purchase of \$6 and above, while others received a coupon that offered \$1 off of any purchase of \$2 and above.

Consumers who received the coupon that required a \$6 purchase increased their average spending above their usual \$4 in an effort to receive their dollar off (see also Milkman et al. 2008). Most importantly for our account, those customers who received the coupon that required only a \$2 purchase to receive \$1 actually decreased their spending from their typical \$4—even though they would have received their dollar off had they spent \$4. These results suggest that goals can be separate from economic incentives involved in decisions about purchasing; the fact that customers left the store with fewer items than they had intended to buy after receiving the conditional \$2 coupon demonstrates that consuming the goal implied by the coupon did in fact trump physical consumption.

Consuming fluency. Another area that has received increased attention in recent years is the impact of fluency—broadly defined, the ease with which stimuli are processed and experienced—on consumer behavior. The classic studies in this domain are Zajonc and colleagues' investigations of mere exposure, where simply being exposed to a stimulus—whether above or below consciousness—leads to more positive affective reactions (Kunst-Wilson & Zajonc 1980, Zajonc 1968) due to the perceptual fluency that results from familiarity (Whittlesea 1993). Indeed, so strong is the link between familiarity and liking that people make two related mistakes: the reverse inference that things they like must be familiar (Monin 2003) and that increased exposure invariably leads to liking even in cases when it does not (Norton et al. 2007). Building off the core concept in Tversky & Kahneman's (1973) availability heuristic—that instances that spring to mind more readily exert greater influence in judgment—Schwarz and his colleagues have explored the more general impact of ease of retrieval (Schwarz 2004, Schwarz & Clore 1996). Such feelings of fluency—of things “feeling right”—have been shown to impact judgments and behavior ranging from brand and product evaluations (Ferraro et al. 2008, Janiszewski

1993, Labroo et al. 2008, Lee & Labroo 2004, Menon & Raghurir 2003), to responses to advertising (Fang et al. 2007, Petrova & Cialdini 2005), to creativity (Csikszentmihalyi 1990), to gambling behavior (Simmons & Nelson 2006), to performance in school (Nelson & Simmons 2007).

Our interest is in how fluency might affect behavior over and above physical consumption. In one particularly striking example using real data from the New York Stock exchange, Alter & Oppenheimer (2006) showed that stocks with fluent stock ticker codes (those whose abbreviations were pronounceable) outperformed stocks with more disfluent names: Given a \$1000 investment, the ten most fluently named shares would have yielded a profit of more than \$100 in the first day of trading and more than \$300 after one year compared with the ten most disfluently named shares. This study offers particularly compelling evidence for the impact of conceptual consumption: Since stock prices are meant to be driven by market factors reflecting the true value of corporations (though see Shleifer & Summers 1990), and stock ticker codes are unrelated to the actual profitability of the companies they represent, these data suggest that fluency alone leads people to value the consumption of stocks with fluent names.

If the desire to consume fluency leads to greater consumption, can disfluency also reduce physical consumption? Novemsky et al. (2007) asked participants to choose between two similar cell phones, while also giving them the option to defer choice. Previous research has demonstrated that as the difficulty of choice increases, people are more likely to defer such choices, avoiding decisional conflict and regret (Anderson 2003, Dhar 1997, Dhar & Simonson 2003, Tversky & Shafir 1992). Whereas these earlier investigations have generally manipulated features of the choice set to induce deferral, Novemsky et al. (2007) subtly manipulated the fluency of the decision by simply making the font in which the product descriptions appeared easier (fluent) or harder (disfluent) to read. Thus, this study explores

the impact of fluency on choice, controlling for the actual physical consumption experience (the cell phones were identical in both conditions). Participants were significantly more likely to defer choice in the disfluent condition, suggesting that their negative consumption of fluency affected their physical consumption (see also Alter et al. 2007).

Consuming “fit.” Consumption of fluency—the feeling of ease that accompanies stimuli that are easy to process—shares characteristics with another area of research that continues to grow in scope and scale: Regulatory “fit,” when people “feel right” when engaged in a task in which their motivations align with their behavior (Higgins 2000, 2005). Regulatory fit has been shown to impact phenomena ranging from the amount of effort people devote to tasks (Vaughn et al. 2006), to their susceptibility to persuasive appeals (Cesario et al. 2004), to their ability to engage in effective self-control (Hong & Lee 2008). Although fluency and fit are conceptually and likely experientially distinct, we suggest that both offer opportunities for conceptual consumption: People can receive value from fit such that the desire to conceptually consume regulatory fit alters physical consumption.

Regulatory fit has been of particular interest in recent years to researchers in consumer behavior (see Aaker & Lee 2006, Avnet & Higgins 2006), with studies exploring the impact of regulatory focus on information processing in consumer choice (Wang & Lee 2006) and on product decisions made in the moment or for the future (Mogilner et al. 2008). Most importantly for our account, research in consumer behavior has demonstrated that fit qualifies as another class of conceptual consumption. In one investigation, Higgins et al. (2003) first assessed participants’ chronic regulatory orientations, sorting them into promotion-focused or prevention-focused individuals. They then offered participants the chance to buy a mug or a pen, but manipulated whether participants considered how much they would gain from choosing one (matching a promotion focus)

or how much they would lose from choosing one (matching a prevention focus). Participants whose chronic orientation matched the mode with which they were asked to make their bids for the item (i.e., who were experiencing fit) offered a 50% price premium over those who were experiencing a mismatch between chronic orientations and task instructions. In a related investigation, Avnet & Higgins (2003) induced participants to adopt either a locomotion or assessment orientation, then asked them to choose book lights either by an elimination strategy (matching the locomotion orientation) or a full-evaluation strategy (matching the assessment orientation). Again, participants’ valuation of the book light was higher when they were experiencing fit than when they were not. Finally, Levav et al. (2008) demonstrated that when multiple products offer an opportunity to consume fit, the conflict between consuming these concepts leads to choice deferral in the same way that conflict between consuming similar physical products does (see Chernev 2004), further evidence of the impact of concepts on consumption. In sum, holding physical consumption constant (the mugs, pens, and book lights in the above experiments were the same in all conditions), the experience of consuming fit appears to offer utility—and the lack of fit or conflicting fit, disutility—suggesting that, like fluency, regulatory fit is conceptually consumed.

PART II: SACRIFICING PHYSICAL CONSUMPTION FOR CONCEPTUAL CONSUMPTION

As we mentioned above, we are far from the first to identify how the desire to consume concepts can influence physical consumption. Indeed, conspicuous consumption offers just such an example, in which people purchase high-priced consumer goods not merely to enjoy the utility of the quality product but also to display their wealth to others, consuming the social status that results (Veblen 1899; see also Amaldoss & Jain 2005, Corneo & Jeanne 1997). With conspicuous consumption, however, physical and

conceptual consumption go hand in hand, as people get both consumption utility and social utility from spending more money. A strong test of the importance of conceptual consumption would be to pit conceptual versus physical consumption and find cases where people are willing to sacrifice utility from physical consumption for the sake of conceptual consumption. Just as Foa (1971) demonstrated that humans trade one form of consumption for another between individuals (e.g., money for goods or love for status), we suggest they may also trade off different kinds of consumption within themselves.

Indeed, we suggest that one of the uses of the construct of conceptual consumption is that it helps to explain—or at minimum bring together under one umbrella—several seemingly paradoxical or self-abnegating behaviors that consumer researchers have identified. When people make choices that are seemingly suboptimal from a utility maximization perspective—forgoing positive experiences, and even more oddly, choosing negative experiences—we suggest that they are very likely to be engaging in some form of conceptual consumption, the utility from which outweighs the loss of utility from forgoing positive or choosing negative experiences. The task for consumer behavior researchers is therefore to identify what class of conceptual consumption is at play and to measure the impact of that concept. Below, we review five domains in which people forgo positive experiences—variety seeking, feature fatigue, strategic memory protection, contamination, and charitable giving—and two in which they not only forgo the positive but seek the negative—via consumption of negative emotions and negative experiences—in order to engage in conceptual consumption.

Forgoing Positive Consumption

Variety seeking. A great deal of attention in the literature has been paid to the notion that people seek variety, or, more accurately, that they seek too much variety—more variety than will make them happy. This tendency to over-

invest in variety is the result of individuals' tendency to spread their consumption evenly across available sets of options (Fox et al. 2005, Read & Loewenstein 1995, Simonson 1990) and even to vary their decision rules from choice to choice (Drolet 2002). For instance, in an experiment in which participants chose between five investment funds, participants presented with four equity funds and one fixed-income fund allocated 68% to equities, whereas those presented with just one equity fund and four fixed-income funds allocated just 43% to equities (Benartzi & Thaler 2001). In another well-known example, when people choose yogurts for each of the days in the coming week at the same time, they tend to choose more variety (selecting some of each flavor), but when they choose a yogurt on each individual day, they tend to diversify much less, picking their favorite (say, blueberry) much more frequently (see Kahneman & Snell 1992). In short, the tendency to seek variety can lead people to end up with suboptimal physical consumption (Ratner et al. 1999).

This tendency is particularly highlighted in social situations, and researchers have focused a great deal of attention on the social aspects of variety seeking. Ariely & Levav (2000), for example, examined the variety-seeking behavior of groups of patrons at a microbrewery as a function of the method of ordering beer. They contrasted the regular method for ordering, in which people stated their order aloud in sequence (such that they could be influenced by one another), with a condition in which individuals marked their orders privately on their menu; patrons who ordered aloud opted for more variety, suggesting that social pressures increased variety seeking. In addition, this variety seeking had consequences: Patrons announcing their orders publicly were less satisfied with the beer they consumed and reported feeling more regret than those who selected their beer privately (and who therefore were immune from variety-seeking norms), offering direct evidence that they sacrificed physical consumption utility as a result of social pressures.

Why would people seek more variety in social settings if it makes them unhappy? We suggest that they were trading off physical consumption for conceptual consumption, in this case, wanting others to see them—and wanting to see themselves—as interesting and unique (Tian et al. 2001). Evidence suggests that variety-seeking is likely effective at accomplishing both goals: Ratner & Kahn (2002) demonstrated that individuals who seek variety are accorded more social status than those who do not, and Sande et al. (1988) offer evidence that in many cases, people wish to see themselves as more multifaceted and unpredictable than others even removed from social settings. Of course, it is not necessarily the case that variety seeking per se is the key to seeing oneself in a positive light and gaining approval from others. For example, individuals in more collectivistic cultures seem to prefer consensus to unique options (Kim & Drolet 2003). We might expect individuals in such cultures to make the opposite tradeoffs in their variety-seeking behavior, choosing less-preferred options to fit in rather than to stand out, in an effort to see themselves as embedded in the social fabric and receive social approval for following cultural norms. In sum, people's variety-seeking behavior may be better understood by taking into account the benefits of physical consumption weighed against the conceptual consumption of social utility made available by such behavior.

Feature fatigue. Similar to research on variety seeking—that when making decisions for future consumption, people choose too much variety that they come to regret—recent work exploring “feature fatigue” demonstrates that people prefer products with more features at the moment of purchase but that feature-rich products subsequently can be difficult if not impossible to use, leaving them dissatisfied with their purchase (Thompson et al. 2005). Why would people make this seeming mistake, choosing products that they can barely use, rather than sticking with simpler products? As with variety seeking, research suggests that one explanation for this behavior is that people may be

trading off satisfaction with their choices for social status. Thompson & Norton (2008) found that making social concerns salient, for example, by informing participants that their choices would be made public to other participants, increased the choice share of feature-rich products; most importantly, observers did accord those who chose feature-rich options higher social status, seeing them as smarter, more interesting, and more cutting-edge. Thus, as with variety-seeking behavior, people seem willing to sacrifice physical consumption (struggling with difficult-to-use cameras) in order to engage in conceptual consumption, the social utility gained from displaying such products to others (see also Berger & Heath 2007).

Strategic memory protection. An even more nuanced behavior involving the sacrifice of physical consumption is evident in a recent investigation by Zauberan et al. (2008). Zauberan and colleagues investigate the odd cases where, when people truly enjoy an experience—deriving utility and satisfaction from it—they forgo ever repeating it. Zauberan et al. (2008) suggest that this behavior is driven by the desire to protect the memory of the past experience from possible contamination by future experiences that might not be as pleasurable. In one study, participants in one condition were asked to recall a special evening out; in the other, they were asked to recall a typical evening out. Not surprisingly, special evenings were rated more highly than typical ones. But when the researchers then asked participants which experience they would want to repeat—with just one change, that they would have to repeat it with a different person or people—participants were more likely to want to repeat the typical evening than the special evening, even though they had just rated this experience as providing less utility.

Why would people engage in this type of behavior, forgoing a repeat of a superior experience to an inferior one? One explanation of this result is that special evenings occur with one's favorite people (e.g., one's partner), and therefore the second evening with a less

significant person is by definition less special. Even given this loss of utility from the company one keeps, however, one would predict from a strict physical consumption standpoint that the special evening (say, dinner at a fancy restaurant) would still be more positive than a typical one (dinner at McDonald's). From a conceptual consumption standpoint, however, this behavior makes perfect sense. Zauberman et al. argue that people are preserving their ability to consume the memory of that event (the concept of that evening) indefinitely, gaining utility from each memory; although repeating the special evening with someone else might be pleasant, depriving oneself of the ability to consume the memory of that one perfect evening is too high a tradeoff. Indeed, previous work has explored how memory serves just this function, of placing people in time and space and giving them a sense of meaning (Cowley 2007, Elster & Loewenstein 1992, Holbrook 1993, Wildschut et al. 2006).

Contamination. Strategic memory protection involves a symbolic desire to prevent future experiences from contaminating memories for special experiences in the past, but fear of contamination is more broadly manifested in physical consumption as well (Rozin & Fallon 1987). For instance, drinks that are in contact even briefly with a sterilized cockroach are seen as contaminated, as are sweaters worn by disliked individuals such as Adolf Hitler (Rozin et al. 1986, 1989). These results suggest that the consumption of disgust—independent of the stimulus to be consumed and independent of any actual harmful contamination—can affect physical consumption. Argo et al. (2006), for example, asked participants to try on T-shirts and rate them but varied whether participants thought that the T-shirt had not been worn or had recently been worn (leading participants to a T-shirt hanging in a dressing room that a confederate had just exited). They found that, despite the fact that participants never witnessed any physical contact with the shirt, the specter of the shirt having been worn raised sufficient disgust to decrease their liking for the

shirt. Morales & Fitzsimons (2007) explored disgust in a nonsocial context, varying whether one product (a box of cookies) either was or was not touching a product that elicited disgust (a box of feminine napkins). Similar to the findings of Argo et al. (2006), even though no actual contamination had been witnessed, the cookies were liked less when their box had been touching the box of feminine items. In sum, people reduced physical consumption of desirable products—T-shirts and cookies—because their conceptual consumption of disgust affected their perceived utility of those products, even though the products remained the same.

So powerful are the effects of consumption of disgust on physical consumption that the mere association of contamination with a food can be enough to reduce physical consumption of that food. In general, such taste aversion learning—in which becoming ill after eating a food creates an aversion to that food—is adaptive in that it can protect humans from ingestion of lethal toxins (Revusky & Bedarf 1967, Rozin & Kalat 1971). Bernstein et al. (2005), however, showed that merely implanting a false memory of experiencing disgust after eating a food was sufficient to lead to avoidance of that food. In one experiment, some 20% of adult participants came to believe that they had become ill after eating strawberry ice cream as a child when the researchers suggested that this experience had actually occurred, and these false beliefs then led them to profess an intention to avoid strawberry ice cream in the future. Thus, the impact of consuming disgust on physical consumption can extend not only forward in time—as demonstrated by Argo et al. (2006) and Morales & Fitzsimons (2007)—but also backward in time, further evidence for the impact of conceptual consumption, in this case the mere memory of contamination, on physical consumption.

Charitable giving. Driven in part by natural disasters that required and elicited enormous amounts of charitable giving (e.g., 9/11, the 2004 tsunami, and Hurricane Katrina), consumer behavior researchers have devoted

increasing attention to the study of charitable donations. From our perspective, charitable donations offer an interesting case of forgoing positive physical consumption, since any donation to another person necessarily precludes givers from using that money to pursue their own happiness. Some cases of such donations may be self-interested, of course. For instance, there are sound evolutionary reasons to behave more altruistically toward genetically related kin (Burnstein et al. 1994, Hamilton 1964; for a recent review, see de Waal 2008), and donating more to charities that seek a cure for an illness that afflicts a loved one might improve that person's chance of survival (Small & Simonsohn 2008).

But what about giving to complete strangers, where there is no chance of any physical benefit coming back (Trivers 1971), as with those whites who donated money to the predominantly minority victims of Hurricane Katrina (Cuddy et al. 2007, Fong & Luttmer 2008)? Researchers have identified a number of factors that influence such donations. People are more generous toward individualized victims than they are toward statistical/aggregated victims (Small & Loewenstein 2003). For example, using personalizing information to single out an individual child with cancer—rather than referring to a group of children with cancer—increases donations to cancer funds (Kogut & Ritov 2005a,b). Although the investigations cited above are important for increasing the frequency and amount of charitable giving, they do not offer an understanding of why people choose to sacrifice their own physical consumption for the physical consumption of strangers. We suggest that they do so to engage in conceptual consumption, to consume a view of themselves as altruistic individuals, leading to the benefit of increased well-being.

The debate between whether helping others is altruistic or self-motivated (making oneself feel better about the another's pain as opposed to helping them unselfishly) has long raged in social science, with psychologists often focusing on why people don't help enough and economists on why they

help at all (Andreoni 1990, Batson et al. 1997, Cialdini et al. 1997, Fehr & Schmidt 1999, Loewenstein et al. 1989; also see Ariely & Norton 2007). In this vein, several recent investigations have explored whether giving is actually a function of social goals, such as signaling one's morality (Ariely et al. 2008) or financial success (Griskevicius et al. 2007).

Recent research suggests that whatever the initial motivation for the behavior, giving to others does confer benefits on the giver in both the short and long term. Dunn et al. (2008) specifically explored the tradeoff between spending a given amount of money on oneself (engaging in physical consumption) and enabling another to engage in physical consumption by giving that money to someone else (thus offering the giver the opportunity to engage in conceptual consumption). A field study showed that employees who spent more of a bonus on others than on themselves reported being happier as a result; indeed, the manner in which they spent that bonus was a more important predictor of their happiness than the size of the bonus itself. In addition, when people were given money one morning and randomly assigned either to spend the money on themselves or on someone else over the course of the day, those who spent it on others were significantly happier that night. These results suggest that when individuals sacrifice their own physical consumption for the physical consumption of others, they successfully trade off positive physical consumption for positive conceptual consumption, as reflected in their greater happiness. Unfortunately, because the mere thought of money can inhibit people from giving to others (Vohs et al. 2006), people may underutilize this path to happiness. We discuss the issue of how to encourage optimal consumer behavior in the Conclusions section.

Choosing Negative Consumption

The odd nature of forgoing positive experiences for the sake of conceptual consumption pales in comparison to research exploring the strange cases in which people actually choose the

negative over the positive. For instance, skydiving is clearly a terrifying experience—even offering a chance, albeit small, of death—yet people pay money for and clearly derive utility from this activity (Celsi et al. 1993). Mountaineering, which offers an even higher chance of death, seems to be similarly and puzzlingly attractive (Loewenstein 1999). We suggest, and some recent research shows, that people may choose negative physical consumption experiences precisely because such experiences offer positive conceptual consumption.

Negative emotions. Research on the consumption of negative emotions has its antecedents in work exploring cases in which people experience mixed emotional and cognitive reactions. In contrast to earlier psychological models that stressed the strong human desire for cognitive consistency, such as Heider's (1958) balance theory and Festinger's (1957) theory of cognitive dissonance, more recent research has focused on how people are not just capable of experiencing mixed emotions (Lau-Gesk 2005, Williams & Aaker 2002) and attitudinal ambivalence (Newby-Clark et al. 2002, Priester & Petty 1996, Priester et al. 2007), but also on how such experiences are quite common. Choosing to engage in experiences that offer mixed emotions, however, means that such experiences by their nature contain at least some positive elements. Larsen et al. (2001) offer the example of viewers seeing the movie *Life is Beautiful*: Viewers are likely to cry during the movie, but writer/director Benigni inserts comedic moments to break the drama.

What can explain consumption of purely negative emotions and experiences? *Life is Beautiful* contains at least some light moments, but what about watching a horror movie where one experiences unabated fear for the duration of the experience? Any model of utility maximization has at its heart the notion that people seek to maximize their hedonic utility, which hardly seems to map onto watching *The Exorcist*. Andrade & Cohen (2007) investigated just these situations—watching horror

movies—to understand how people might benefit from these experiences. They found that, at least for people predisposed to horror movies, the negative emotions elicited by such movies are coactivated with positive emotions. Engaging in negative physical consumption thus ironically provides an opportunity to engage in positive conceptual consumption, perhaps providing a source of utility in addition to that which comes from consuming purely positive experiences.

Negative experiences. Although Andrade & Cohen (2007) focus specifically on negative emotions elicited by movies, Keinan & Kivetz (2008) examine a wider range of seemingly suboptimal behavior, from sleeping in ice houses to eating bacon ice cream. In one study, Keinan & Kivetz (2008) asked participants to make a choice between staying at a Marriott in Florida or an ice hotel in Quebec; despite the fact that participants thought the Marriott would be more pleasurable, they preferred the ice hotel. As with the variety-seeking research reviewed above, one view of choosing bacon ice cream is that people are simply behaving suboptimally by engaging in negative physical consumption; our view is that they are trading off the negative physical consumption for positive conceptual consumption.

Indeed, Keinan & Kivetz (2008) share our view that this seemingly baffling behavior may be more rational than it appears, writing about how people use such experiences to check off boxes on their “experiential CVs.” Other researchers have explored how collecting can provide people with a sense of purpose (Belk 1995); in fact, individuals can become so preoccupied with completing collections that collecting can develop into pathological hoarding (Tolin et al. 2007). In one study, Keinan & Kivetz (2008) checked participants' watches to see if they were set ahead as an index of how concerned people were with using their time productively, and found that people who set their watches ahead—individuals most concerned about using their time to complete tasks (such as collecting experiences)—were precisely

those individuals likely to choose exotic options. Thus, people appear to engage in negative consumption—sleeping on ice instead of pillows—because such negative physical consumption allows them to experience positive conceptual consumption, allowing them to enjoy a view of themselves as productive people who are adding to their collections of experiences.

CONCLUSIONS AND FUTURE DIRECTIONS

In this review, we have tried to provide a framework for categorizing and linking a variety of phenomena that have been studied in isolation. In particular, our goal was to suggest that these seemingly unrelated phenomena—for instance, the impact of fluency on consumer behavior and the odd cases when people choose to consume negative experiences—can be understood by considering the extent to which they implicate conceptual consumption. Our goal was not to cover every topic in consumer behavior, nor even to be comprehensive on each topic that we chose to include—the literature on goals alone likely would fill an Annual Review chapter—but rather to describe those investigations that best demonstrate the nature and impact of conceptual consumption. We again stress that we are far from the first researchers to note the role of psychological factors in influencing consumption, but we hope that by highlighting the connections between consumer behavior researchers who take a sociological or anthropological approach to those who take an experimental approach, conceptual consumption might serve as a link between these different orientations.

In the remainder of this review, we discuss potential contributions for conceptual consumption in three different areas of research. We first focus on the impact of conceptual consumption on the formation and perpetuation of preferences. We next focus on how a deeper consideration of conceptual consumption might be used to inform scholarship in two areas with implications for public policy:

research investigating people's willingness to enact virtual social lives—and spend money constructing those lives—on the Internet, and research devoted to helping consumers make better consumption decisions in both the short and long term.

Conceptual Consumption Over Time: Inferring Preferences from Actions

In this review, we particularly focus on research demonstrating the impact of conceptual consumption on physical consumption in the short term, such as how consuming goals changes purchasing behavior on one shopping trip. Elsewhere, we have described a two-stage model outlining how, in contrast to the economic model that actions reflect underlying preferences, actions can in fact create preferences (Ariely & Norton 2008). As an example, imagine a woman who moves to a new city and is hungry on her first evening in her new building. It just so happens that a pizza vendor a few blocks away placed flyers in that building earlier that day; our new tenant sees the flyer, calls that restaurant (not knowing any others), and has what is likely at least a decent pizza. What happens the next time she wants pizza? She recalls the pizza she had before and does not infer that her “preference” was caused by the fact that this pizza shop happened to inundate the building with flyers that day (whereas had she moved in one day earlier or later, a different vendor may have placed flyers, leading her to develop a “preference” for that shop instead). Rather, she recalls that this store actually offers better pizza than other stores. In this way, people can develop preferences for “their” pizza shop that are caused by their actions, rather than act in ways that reveal their preferences (see also Bem 1972). Indeed, people may even incorporate this preference into their self-concepts, deriving utility from seeing themselves as the kind of person who frequents such “quality” establishments.

Certainly, the first stage of this model is not controversial. Abundant evidence demonstrates that people's preferences are frequently

constructed in the moment and are susceptible to fleeting situational factors (Bettman et al. 1998, Payne et al. 1993, Shafir et al. 1993, Slovic 1995), such as subtle primes (Bargh & Chartrand 1999, Fitzsimons et al. 2002), incidental emotions (Cryder et al. 2008, Lerner et al. 2004), or even the weather (Simonsohn 2007). Indeed, much of the bulk of this review is a catalogue of the way that different concepts—from fluency to fit to contamination—serve to shape people’s preferences without their awareness. To take just one example, participants’ choice of cell phones as described in Novemsky et al. (2007) was driven by the fluency of the advertisements for those phones; we suggest that they would be very unlikely to attribute their behavior to those fonts, instead believing that they valued the phone at the price they paid.

This second stage, where we propose that individuals are insensitive to the impact of situational factors on their behavior, misattributing utility caused by irrelevant factors to stable underlying preferences that then guide subsequent behavior in the longer term, requires future research. Ariely et al. (2003) showed that when participants were asked to indicate whether they would pay a given price—arbitrarily set by the last two digits of their social security number—for a bottle of wine, those with higher social security numbers bid more. In addition, bids for subsequent bottles of wine followed in a coherent manner, such that better bottles of wine fetched higher prices, even though the initial price had been arbitrarily induced. These results offer some evidence that people do observe their past behavior and see it as reflective of preferences even when these preferences were actually determined by situational factors.

We believe that studies that explore conceptual and physical consumption in tandem offer an excellent opportunity to better understand the psychology of actions leading to preferences and thus advance the field’s knowledge of this key debate between psychology and economics. By measuring conceptual consumption as an important input into total utility, researchers not only can better understand seeming viola-

tions of utility maximization (such as sleeping in ice hotels), but also can be better able to predict the circumstances under which people might both choose these seemingly suboptimal outcomes and turn them into longer-lasting patterns of behavior.

Virtual Consumption as Conceptual Consumption

As consumers increasingly move their physical consumption online, buying their books, music, clothes, and computers sight unseen, researchers in consumer behavior have begun to investigate the impact of this new channel on both consumer decision-making and subsequent satisfaction (Alba et al. 1997, Bellman et al. 2006, Deighton & Kornfeld 2007, Hamilton & Thompson 2007). Perhaps one of the most fascinating changes to consumption as a result of online consumer behavior is the seemingly unstoppable popularity of social networking sites and virtual worlds such as Myspace and Second Life: Some 55% of Americans aged 12–17 have created online profiles, and 16 million Americans have used an online dating Web site (Amichai-Hamburger & Furnham 2007, Castronova 2005, Frost et al. 2008, Lenhart & Madden 2007, Madden & Lenhart 2006). Even more interestingly, people engage in virtual commerce on such sites, converting real money into virtual currency, then using that currency to decorate their virtual apartments and dress their avatars, buying virtual consumer goods from the many companies, such as Nike and American Apparel, that have opened virtual stores in Second Life.

Why are people happy to conduct their social lives online and “waste” their real money on buying imaginary products? Examined from the viewpoint of conceptual consumption, both behaviors are less inexplicable. Face-to-face interaction offers some utility that virtual interaction cannot (physical contact, for example), whereas social utility is conceptual, available for consumption in person or at a remove. As a result, virtual interaction at such sites may in fact meet people’s consumption needs. Similarly,

although buying virtual Nikes for one's avatar removes some physical utility derived from using the shoes (though Nike cleverly designed shoes that allow avatars to run faster), the conceptual consumption engendered by identifying with and displaying brands (Aaker 1997, Belk 1988) means that forgoing the physical product may detract very little from the enjoyable conceptual consumption that owning a Nike product allows. Although the enduring popularity of any specific social networking site or virtual world is difficult to predict—witness the rapid rise and fall of Friendster—we suggest that sites that offer more opportunities for conceptual consumption are likely to gain more traction.

Conceptual Consumption and “Improved” Consumer Behavior

We conclude by discussing how consideration of the importance of conceptual consumption can be used to inform efforts to help consumers better manage their consumption in both the short and long term. There has been an increase in recent years in calls for consumer behavior researchers to engage in research designed to benefit consumers (Bazerman 2001), using the knowledge acquired from previous research to improve public policy (Mick 2007, Ratner et al. 2008, Thaler & Sunstein 2008). Indeed, our review of the literature on charitable giving above offers one domain in which such work is already under way. Much of the focus on changing people's behavior for the better has been on exploring ways to move them from engaging in “want” behaviors and indulging their sometimes shortsighted passions to “should” behaviors such as planning for the future (Bazerman et al. 1998, Loewenstein 1996, Schelling 1984; for a recent review, see Milkman et al. 2008). We suggest that offering people a chance to engage in conceptual consumption when they are required to trade off physical consumption may be an effective means of reaching this goal. Given that people will not be able to eat all the ice cream they want, researchers can explore ways in which consuming some concept might

substitute—at least in part—for that foregone physical consumption.

We close with an illustrative example of a successful intervention from political science that is close in spirit to our proposition, one that utilizes people's desire to consume social utility as a trigger for overcoming people's resistance to civic engagement. Of course, countless studies in social psychology have demonstrated the impact of social norms on behavior, from Asch's (1951) famous conformity studies to Goldstein et al.'s (2008) demonstration of the impact of social norms on towel reuse in hotels (see Cialdini & Goldstein 2004). These studies, however, often have the flavor of twisting people's arms to comply with some norm; from our standpoint, such appeals may be effective because they give individuals the opportunity to consume social utility. In a field study designed to increase voting, Gerber et al. (2008) mailed flyers to prospective voters: In one condition, the flyer merely reminded people that voting was their civic duty, while in another, the flyer revealed both the household's voter turnout and their neighbors' turnout and suggested that a follow-up mailing after the election would report whether or not the recipient voted. In contrast to the first condition, then, the latter condition forces people who fail to vote to sacrifice social utility, whereas voting offers them a chance to display their good behavior to their neighbors and to consume social utility. This social utility condition increased turnout by more than 8% compared to a control condition, whereas the civic duty reminder increased voting by less than 2%.

In addition, in line with Ariely & Norton's (2008) contention that preferences caused by situational factors can lead people to infer underlying preferences, research suggests that voting is habit forming, in that if people vote just once they are much more likely to become voters (Gerber et al. 2003), suggesting a possible longer-term impact of conceptual consumption on behavior. Assuming that higher voter turnout is desirable in a democratic society, these studies serve as promising evidence that increasing opportunities for conceptual

consumption when asking consumers to alter physical consumption can increase social welfare. We hope that consumer behavior researchers will continue the trend of engaging in research designed to help consumers make wiser decisions.

DISCLOSURE STATEMENT

The authors are not aware of any biases that might be perceived as affecting the objectivity of this review.

ACKNOWLEDGMENTS

We thank Jim Bettman, John Deighton, Anat Keinan, and Kathleen Vohs for their helpful suggestions, and Megan Hogerty for her assistance.

LITERATURE CITED

- Aaker JL. 1997. Dimensions of brand personality. *J. Mark. Res.* 34:347–56
- Aaker JL, Lee AY. 2006. Understanding regulatory fit. *J. Mark. Res.* 43:15–19
- Aarts H, Gollwitzer PM, Hassin R. 2004. Goal contagion: Perceiving is for pursuing. *J. Personal. Soc. Psychol.* 87:23–37
- Alba J, Lynch J, Weitz B, Janiszewski C, Lutz R, et al. 1997. Interactive home shopping: consumer, retailer, and manufacturer incentives to participate in electronic marketplaces. *J. Mark.* 61:38–53
- Allison RI, Uhl KP. 1964. Influence of beer brand identification on taste perception. *J. Mark. Res.* 1:36–39
- Allport GW, Postman L. 1947. *The Psychology of Rumor*. New York: Holt
- Alter AL, Oppenheimer DM. 2006. Predicting short-term stock fluctuations by using processing fluency. *Proc. Natl. Acad. Sci. USA* 103:9369–72
- Alter AL, Oppenheimer DM, Epley N, Eyre RN. 2007. Overcoming intuition: metacognitive difficulty activates analytic reasoning. *J. Exp. Psychol.: Gen.* 136:569–76
- Amaldoss W, Jain S. 2005. Conspicuous consumption and sophisticated thinking. *Manage. Sci.* 51(10):1449–66
- Amichai-Hamburger Y, Furnham A. 2007. The positive net. *Comput. Hum. Behav.* 23:1033–45
- Anderson CJ. 2003. The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychol. Bull.* 129:139–67
- Andrade EB, Cohen JB. 2007. On the consumption of negative feelings. *J. Consum. Res.* 34:283–300
- Andreoni J. 1990. Impure altruism and donations to public goods: a theory of warm-glow giving. *Econ. J.* 100:464–77
- Argo JJ, Dahl DW, Morales AC. 2006. Consumer contamination: how consumers react to products touched by others. *J. Mark.* 70:81–94
- Ariely D, Bracha A, Meier S. 2008. Doing good or doing well? Image motivation and monetary incentives in behaving prosocially. *Am. Econ. Rev.* In press
- Ariely D, Levav J. 2000. Sequential choice in group settings: taking the road less traveled and less enjoyed. *J. Consum. Res.* 27:279–90
- Ariely D, Loewenstein G, Prelec D. 2003. Coherent arbitrariness: stable demand curves without stable preferences. *Q. J. Econ.* 118:73–105
- Ariely D, Norton MI. 2007. Psychology and experimental economics: a gap in abstraction. *Curr. Dir. Psychol. Sci.* 16:336–39
- Ariely D, Norton MI. 2008. How actions create—not just reveal—preferences. *Trends Cogn. Sci.* 12:13–16
- Ariely D, Wertenbroch K. 2002. Procrastination, deadlines, and performance: self-control by precommitment. *Psychol. Sci.* 13:219–24
- Arkes HR, Blumer C. 1985. The psychology of sunk cost. *Organ. Behav. Hum. Dec.* 35:124–40
- Asch SE. 1951. Effects of group pressure upon the modification and distortion of judgment. In *Groups, Leadership and Men*, ed. H Guetzkow, pp. 177–90. Pittsburgh, PA: Carnegie Press

- Avnet T, Higgins ET. 2003. Locomotion, assessment, and regulatory fit: value transfer from “how” to “what.” *J. Exp. Soc. Psychol.* 39:525–30
- Avnet T, Higgins ET. 2006. How regulatory fit affects value in consumer choices and opinions. *J. Mark. Res.* 43:1–10
- Bagozzi RP, Dholakia UM. 1999. Goal setting and goal striving in consumer behavior. *J. Mark.* 63:19–32
- Bagozzi RP, Edwards EA. 1998. Goal setting and goal pursuit in the regulation of body weight. *Psychol. Health* 13:593–621
- Bargh JA, Chartrand TL. 1999. The unbearable automaticity of being. *Am. Psychol.* 54:462–79
- Bargh JA, Gollwitzer PM, Chai AL, Barndollar K, Trötschel R. 2001. Automated will: nonconscious activation and pursuit of behavioral goals. *J. Personal. Soc. Psychol.* 81:1014–27
- Batson CD, Sager K, Garst E, Kang M, Rubchinsky K, Dawson K. 1997. Is empathy-induced helping due to self-other merging? *J. Personal. Soc. Psychol.* 73:495–509
- Baumgartner H, Pieters FGM. 2008. Goal-directed consumer behavior. In *Handbook of Consumer Psychology*, ed. C Haugtvedt, P Herr, F Kardes, pp. 367–92. Mahwah, NJ: Psychol. Press
- Bazerman MH. 2001. Consumer research for consumers. *J. Consum. Res.* 27:499–504
- Bazerman MH, Tenbrunsel AE, Wade-Benzoni KA. 1998. Negotiating with yourself and losing: making decisions with competing internal preferences. *Acad. Manage. Rev.* 23:225–41
- Belk RW. 1988. Possessions and the extended self. *J. Consum. Res.* 15:139–67
- Belk RW. 1995. *Collecting in a Consumer Society*. London: Routledge
- Bellman S, Johnson EJ, Lohse GL, Mandel N. 2006. Designing marketplaces of the artificial with consumers in mind: four approaches to understanding consumer behavior in electronic environments. *J. Interact. Mark.* 20:21–33
- Bem DJ. 1972. Self-perception theory. *Adv. Exp. Soc. Psychol.* 6:1–62
- Benartzi S, Thaler RH. 2001. Naive diversification strategies in retirement saving plans. *Am. Econ. Rev.* 91(1):79–98
- Berger J, Heath C. 2007. Where consumers diverge from others: identity-signaling and product domains. *J. Consum. Res.* 34:121–34
- Bernstein DM, Laney C, Morris EK, Loftus EF. 2005. False beliefs about fattening foods can have healthy consequences. *Proc. Natl. Acad. Sci. USA* 102:13724–31
- Berthoud H, Morrison C. 2008. The brain, appetite, and obesity. *Annu. Rev. Psychol.* 59:55–92
- Bettman JR, Luce MF, Payne JW. 1998. Constructive consumer choice processes. *J. Consum. Res.* 25:187–217
- Borgmann A. 2000. The moral complexion of consumption. *J. Consum. Res.* 26:418–22
- Boulding W, Kalra A, Staelin R. 1999. The quality double whammy. *Mark. Sci.* 18:463–84
- Boulding W, Kalra A, Staelin R, Zeithaml VA. 1993. A dynamic process model of service quality: from expectations to behavioral intentions. *J. Mark. Res.* 30:7–27
- Braun KA. 1999. Postexperience advertising effects on consumer memory. *J. Consum. Res.* 25:319–34
- Burnstein E, Crandall C, Kitayama S. 1994. Some neo-Darwinian decision rules for altruism: weighing cues for inclusive fitness as a function of the biological importance of the decision. *J. Personal. Soc. Psychol.* 67:773–89
- Castronova E. 2005. *Synthetic Worlds: The Business and Culture of Online Games*. Chicago: Univ. Chicago Press
- Celsi RL, Rose RL, Leigh TW. 1993. An exploration of high-risk leisure consumption through skydiving. *J. Consum. Res.* 20:1–20
- Cesario J, Grant H, Higgins ET. 2004. Regulatory fit and persuasion: transfer from “feeling right.” *J. Personal. Soc. Psychol.* 86:388–404
- Chartrand TL, Dalton AN, Fitzsimons GJ. 2007. Nonconscious relationship reactance: when significant others prime opposing goals. *J. Exp. Soc. Psychol.* 43:719–26
- Chen M, Bargh JA. 1997. Nonconscious behavioral confirmation processes: the self-fulfilling consequences of automatic stereotype activation. *J. Exp. Soc. Psychol.* 33:541–60
- Chernev A. 2004. Goal-attribute compatibility in consumer choice. *J. Consum. Psychol.* 14:141–50
- Cialdini RB, Brown SL, Lewis BP, Luce C, Neuberg SL. 1997. Reinterpreting the empathy-altruism relationship: When one into one equals oneness. *J. Personal. Soc. Psychol.* 73:481–94
- Cialdini RB, Goldstein NJ. 2004. Social influence: compliance and conformity. *Annu. Rev. Psychol.* 55:591–621

- Corneo G, Jeanne O. 1997. Conspicuous consumption, snobbism and conformism. *J. Public Econ.* 66:55–71
- Cowley E. 2007. How enjoyable was it? Remembering an affective reaction to a previous consumption experience. *J. Consum. Res.* 34:494–505
- Cryder CE, Lerner JS, Gross JJ, Dahl RE. 2008. Misery is not miserly: sad and self-focused individuals spend more. *Psychol. Sci.* 19:525–30
- Cuddy AJC, Rock MS, Norton MI. 2007. Aid in the aftermath of Hurricane Katrina: inferences of secondary emotions and intergroup helping. *Group. Process. Intergroup Relat.* 10:107–18
- Csikszentmihalyi M. 1990. *Flow: The Psychology of Optimal Experience*. New York: Harper Perennial
- Darley JM, Gross PH. 1983. A hypothesis-confirming bias in labeling effects. *J. Personal. Soc. Psychol.* 44:20–33
- Dawkins RM. 1976. *The Selfish Gene*. London: Oxford Univ. Press
- Deighton J. 2007. The territory of consumer research: walking the fences. *J. Consum. Res.* 34:279–82
- Deighton J, Kornfeld L. 2007. *Digital interactivity: unanticipated consequences for markets, marketing, and consumers*. Work. pap., Harvard Business School, Boston, MA
- De Waal FBM. 2008. Putting the altruism back into altruism: the evolution of empathy. *Annu. Rev. Psychol.* 59:279–300
- Dhar R. 1997. Consumer preference for a no-choice option. *J. Consum. Res.* 24:215–31
- Dhar R, Huber J, Khan U. 2007. The shopping momentum effect. *J. Mark. Res.* 64:370–78
- Dhar R, Simonson I. 2003. The effect of forced choice on choice. *J. Mark. Res.* 40:146–60
- Drolet A. 2002. Inherent rule variability in consumer choice: changing rules for change's sake. *J. Consum. Res.* 29:293–305
- Drucker PF. 1959. *Landmarks of Tomorrow: A Report On the New "Post-Modern" World*. New York: Harper & Row
- Dunn EW, Aknin LB, Norton MI. 2008. Spending money on others promotes happiness. *Science* 319:1687–88
- Elster J, Loewenstein G. 1992. Utility from memory and anticipation. In *Choice Over Time*, ed. G Loewenstein, J Elster, pp. 213–34. New York: Sage Found.
- Fang X, Singh S, Ahluwalia R. 2007. An examination of different explanations for the mere exposure effect. *J. Consum. Res.* 34:97–103
- Fehr E, Schmidt KM. 1999. A theory of fairness, competition and co-operation. *Q. J. Econ.* 114:817–68
- Ferraro R, Bettman JR, Chartrand TL. 2008. The power of strangers: the effect of incidental consumer-brand encounters on brand choice. *J. Consum. Res.* In press
- Festinger L. 1957. *A Theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson
- Fishbach A, Dhar R. 2005. Goals as excuses or guides: the liberating effect of perceived goal progress on choice. *J. Consum. Res.* 32:370–77
- Fishbach A, Friedman RS, Kruglanski AW. 2003. Leading us not unto temptation: momentary allurements elicit overriding goal activation. *J. Personal. Soc. Psychol.* 84:296–309
- Fiske ST, Taylor SE. 2008. *Social Cognition: From Brains to Culture*. New York: McGraw-Hill
- Fitzsimons GJ, Hutchinson JW, Alba JW, Chartrand TL, Huber J, et al. 2002. Non-conscious influences on consumer choice. *Mark. Lett.* 13:267–77
- Fitzsimons GJ, Morwitz VG. 1996. The effect of measuring intent on brand-level purchase behavior. *J. Consum. Res.* 23:1–11
- Fitzsimons GM, Bargh JA. 2003. Thinking of you: nonconscious pursuit of interpersonal goals associated with relationship partners. *J. Personal. Soc. Psychol.* 84:148–64
- Foa UG. 1971. Interpersonal and economic resources. *Science* 171:345–51
- Fong CM, Luttmer EFP. 2008. *What determines giving to Hurricane Katrina victims? Experimental evidence on racial group loyalty*. Work. pap., NBER, Harvard Univ., Cambridge, MA
- Fournier S. 1998. Consumers and their brands: developing relationship theory in consumer research. *J. Consum. Res.* 24:343–73
- Fox CR, Ratner RK, Lieb DS. 2005. How subjective grouping of options influences choice and allocation: diversification bias and the phenomenon of partition dependence. *J. Exp. Psychol.: Gen.* 134(4):538–51
- Frost JH, Chance Z, Norton MI, Ariely D. 2008. People are experience goods: improving online dating with Virtual Dates. *J. Interact. Mark.* 22:51–61
- Gerber AS, Green DP, Larimer CW. 2008. Social pressure and voter turnout: evidence from a large-scale field experiment. *Am. Polit. Sci. Rev.* 102:33–48

- Gerber AS, Green DP, Shachar R. 2003. Voting may be habit-forming: evidence from a randomized field experiment. *Am. J. Polit. Sci.* 47:540–50
- Gerstner E. 1985. Do higher prices signal higher quality? *J. Mark. Res.* 22:209–15
- Gilbert DT, Wilson TD. 2007. Propection: experiencing the future. *Science* 317:1351–54
- Goldstein NJ, Cialdini RB, Griskevicius V. 2008. A room with a viewpoint: using social norms to motivate environmental conservation in hotels. *J. Consum. Res.* In press
- Gollwitzer PM. 1990. Action phases and mind-sets. In *The Handbook of Motivation and Cognition: Foundations of Social Behavior*, ed. ET Higgins, RM Sorrentino, 2:53–92. New York: Guilford
- Gollwitzer PM. 1999. Implementation intentions: strong effects of simple plans. *Am. Psychol.* 54:493–503
- Greenwald AF, Carnot CG, Beach R, Young B. 1987. Increasing voting behavior by asking people if they expect to vote. *J. Appl. Psychol.* 72:315–18
- Griskevicius V, Tybur JM, Sundie JM, Cialdini RB, Miller GF, Kenrick DT. 2007. Blatant benevolence and conspicuous consumption: when romantic motives elicit strategic costly signals. *J. Personal. Soc. Psychol.* 93:85–102
- Hamilton RW, Thompson DV. 2007. Is there a substitute for direct experience? Comparing consumers' preferences after direct and indirect product experiences. *J. Consum. Res.* 34:546–55
- Hamilton WD. 1964. The genetical evolution of social behaviour I and II. *J. Theor. Biol.* 7:1–16
- Heath C, Bell C, Sternberg E. 2001. Emotional selection in memes: the case of urban legends. *J. Personal. Soc. Psychol.* 81:1028–41
- Heath C, Larrick RP, Wu G. 1999. Goals as reference points. *Cogn. Psychol.* 38:79–109
- Heider F. 1958. *The Psychology of Interpersonal Relations*. New York: Wiley
- Higgins ET. 2000. Making a good decision: value from fit. *Am. Psychol.* 55:1217–30
- Higgins ET. 2005. Value from regulatory fit. *Curr. Dir. Psychol. Sci.* 14:209–13
- Higgins ET, Idson LC, Freitas AL, Spiegel S, Molden DC. 2003. Transfer of value from fit. *J. Personal. Soc. Psychol.* 84:1140–53
- Hirschman EC, Holbrook MB. 1982. Hedonic consumption: emerging concepts, methods and propositions. *J. Mark.* 46:92–101
- Holbrook MB. 1993. Nostalgia and consumption preferences. *J. Consum. Res.* 20:245–56
- Holbrook MB, Hirschman EC. 1982. The experiential aspects of consumption—consumer fantasies, feelings, and fun. *J. Consum. Res.* 9:132–40
- Holt DB. 1995. How consumers consume: a typology of consumption practices. *J. Consum. Res.* 22:1–16
- Hong JW, Lee AY. 2008. Be fit and be strong: mastering self-regulation through regulatory fit. *J. Consum. Res.* 34:682–95
- Hsee CK, Yu F, Zhang J, Zhang Y. 2003. Medium maximization. *J. Consum. Res.* 30:1–14
- Irmak C, Block LG, Fitzsimons GJ. 2005. The placebo effect in marketing: Sometimes you just have to want it to work. *J. Mark. Res.* 42:406–9
- Janiszewski C. 1993. Preattentive mere exposure effects. *J. Consum. Res.* 20:376–92
- Jussim L, Harber KD. 2005. Teacher expectations and self-fulfilling prophecies: knowns and unknowns, resolved and unresolved controversies. *Personal. Soc. Psychol. Rev.* 9:131–55
- Kahneman D, Miller DT. 1986. Norm theory: comparing reality to its alternatives. *Psychol. Rev.* 93:126–53
- Kahneman D, Snell J. 1992. Predicting a changing taste: Do people know what they will like? *J. Behav. Decis. Making* 5:187–200
- Kaplan P. 2000. The darker side of the original affluent society. *J. Anthropol. Res.* 56:301–24
- Keinan A, Kivetz R. 2008. *Productivity mindset and the consumption of collectible experiences*. Work. pap., Harvard Business School, Boston, MA
- Kim HS, Drolet A. 2003. Choice and self-expression: a cultural analysis of variety-seeking. *J. Personal. Soc. Psychol.* 85:373–82
- Kivetz R, Urminsky O, Zheng Y. 2006. The goal-gradient hypothesis resurrected: purchase acceleration, illusionary goal progress, and customer retention. *J. Mark. Res.* 43:39–58
- Klein O, Snyder M. 2003. Stereotypes and behavioral confirmation: from interpersonal to intergroup perspectives. *Adv. Exp. Soc. Psychol.* 35:153–234
- Kogut T, Ritov I. 2005a. The singularity effect of identified victims in separate and joint evaluations. *Organ. Behav. Hum. Dec.* 97:106–16

- Kogut T, Ritov I. 2005b. The “identified victim” effect: an identified group, or just single individual? *J. Behav. Decis. Making* 18:157–67
- Kopalle PK, Lehmann DR. 2001. Strategic management of expectations: the role of disconfirmation sensitivity and perfectionism. *J. Mark. Res.* 38:386–94
- Kopalle PK, Lehmann DR. 2006. Setting quality expectations when entering a market: What should the promise be? *Mark. Sci.* 25:8–24
- Kunst-Wilson WR, Zajonc RB. 1980. Affective discrimination of stimuli that cannot be recognized. *Science* 207:557–58
- Labroo A, Dhar R, Schwarz N. 2008. Of frowning watches and frog wines: semantic priming and visual fluency. *J. Consum. Res.* 34:819–31
- Larsen JT, McGraw AP, Cacioppo JT. 2001. Can people feel happy and sad at the same time? *J. Personal. Soc. Psychol.* 81:684–96
- Lau-Gesk L. 2005. Understanding consumer evaluations of mixed affective experiences. *J. Consum. Res.* 32:23–28
- Lee AY, Labroo A. 2004. The effect of conceptual and perceptual fluency on brand evaluation. *J. Mark. Res.* 41:151–65
- Lee L, Ariely D. 2006. Shopping goals, goal concreteness, and conditional promotions. *J. Consum. Res.* 33:60–70
- Lee L, Frederick S, Ariely D. 2006. Try it, you’ll like it: the influence of expectation, consumption, and revelation on preferences for beer. *Psychol. Sci.* 17:1054–58
- Lenhart A, Madden M. 2007. *Social Networking Websites and Teens: An Overview*. Washington, DC: Pew Internet Am. Life Proj.
- Lerner JS, Small DA, Loewenstein G. 2004. Heart strings and purse strings: carryover effects of emotions on economic decisions. *Psychol. Sci.* 15:337–40
- Levav J, Kivetz R, Cho CK. 2008. *Too much fit? How regulatory fit can turn us into Buridan’s asses*. Work. pap., Columbia Univ., New York, NY
- Levin IP, Gaeth GJ. 1988. How consumers are affected by the framing of attribute information before and after consuming the product. *J. Consum. Res.* 15:374–78
- Loewenstein G. 1996. Out of control: visceral influences on behavior. *Organ. Behav. Hum. Dec.* 65:272–92
- Loewenstein G. 1999. Because it is there: the challenge of mountaineering . . . for utility theory. *Kyklos* 52:315–44
- Loewenstein G, Thompson L, Bazerman M. 1989. Social utility and decision making in interpersonal contexts. *J. Personal. Soc. Psychol.* 57:426–41
- Loken B. 2006. Consumer psychology: categorization, inferences, affect, and persuasion. *Annu. Rev. Psychol.* 57:453–85
- Lord CG, Ross L, Lepper MR. 1979. Biased assimilation and attitude polarization: the effects of prior theories on subsequently considered evidence. *J. Personal. Soc. Psychol.* 37:2098–109
- Madden M, Lenhart A. 2006. *Online Dating*. Washington, DC: Pew Internet Am. Life Proj.
- Madon S, Guyll M, Spoth RL, Cross SE, Hilbert SJ. 2003. The self-fulfilling influence of mother expectations on children’s underage drinking. *J. Personal. Soc. Psychol.* 84:1188–205
- Mason MF, Bar M, Macrae CN. 2008. Exploring the past and impending future in the here and now: mind-wandering in the default state. *Cognitive Sci.* In press
- Mason MF, Norton MI, Van Horn JD, Wegner DM, Grafton ST, Macrae CN. 2007. Wandering minds: the default network and stimulus-independent thought. *Science* 315:393–95
- McClure SM, Li J, Tomlin D, Cypert KS, Montague LM, Montague PR. 2004. Neural correlates of behavioral preference for culturally familiar drinks. *Neuron* 44:379–87
- Menon G, Raghuraj P. 2003. Ease-of-retrieval as an automatic input in judgments: a mere-accessibility framework? *J. Consum. Res.* 30:230–43
- Merton RK. 1948. The self-fulfilling prophecy. *Antioch Rev.* 8:193–210
- Mick DG. 1986. Consumer research and semiotics—exploring the morphology of signs, symbols, and significance. *J. Consum. Res.* 13:196–213
- Mick DG. 2003. From the editor: appreciation, advice, and some aspirations for consumer research. *J. Consum. Res.* 29:i–viii

- Mick DG. 2007. The end(s) of marketing and the neglect of moral responsibility by the American Marketing Association. *J. Public Policy Mark.* 26:289–92
- Milkman KL, Beshears J, Rogers T, Bazerman M. 2008. *Mental accounting and small windfalls: evidence from an online grocer*. Work. pap., Harvard Business School, Boston, MA
- Milkman KL, Rogers T, Bazerman MH. 2008. Harnessing our inner angels and demons: what we have learned about want/should conflicts and how that knowledge can help us reduce short-sighted decision making. *Perspect. Psychol. Sci.* 3:324–38
- Mogilner C, Aaker J, Pennington G. 2008. Time will tell: the distant appeal of promotion and imminent appeal of prevention. *J. Consum. Res.* 34:670–81
- Monin B. 2003. The warm glow heuristic: when liking leads to familiarity. *J. Personal. Soc. Psychol.* 85:1035–48
- Morales AC, Fitzsimons GJ. 2007. Product contagion: changing consumer evaluations through physical contact with “disgusting” products. *J. Mark. Res.* 44:272–83
- Morwitz VG, Johnson E, Schmittlein D. 1993. Does measuring intent change behavior? *J. Consum. Res.* 20:46–61
- Nelson LD, Norton MI. 2005. From student to superhero: situational primes shape future helping. *J. Exp. Soc. Psychol.* 41:423–30
- Nelson LD, Simmons JP. 2007. Moniker maladies: when names sabotage success. *Psychol. Sci.* 18:1106–1112
- Nevid JS. 1981. Effects of brand labeling on ratings of product quality. *Percept. Mot. Skills* 53:407–10
- Newby-Clark IR, McGregor I, Zanna MP. 2002. Thinking and caring about cognitive inconsistency: When and for whom does attitudinal ambivalence feel uncomfortable? *J. Personal. Soc. Psychol.* 82:157–66
- Norton MI, Frost JH, Ariely D. 2007. Less is more: the lure of ambiguity, or why familiarity breeds contempt. *J. Personal. Soc. Psychol.* 92:97–105
- Norton MI, Goethals GR. 2004. Spin (and pitch) doctors: campaign strategies in televised political debates. *Polit. Behav.* 26:227–48
- Norton MI, Vandello JA, Darley JM. 2004. Casuistry and social category bias. *J. Personal. Soc. Psychol.* 87:817–31
- Novemsky N, Dhar R, Schwarz N, Simonson I. 2007. Preference fluency in choice. *J. Mark. Res.* 44:347–56
- Nunes JC, Dreze X. 2006. The endowed progress effect: how artificial advancement increases effort. *J. Consum. Res.* 32:504–12
- Payne JW, Bettman JR, Johnson EJ. 1993. *The Adaptive Decision Maker*. New York: Cambridge Univ. Press
- Petrova PK, Cialdini RB. 2005. Fluency of consumption imagery and the backfire effects of imagery appeals. *J. Consum. Res.* 32:442–52
- Pinel JPJ, Assanand S, Lehman DR. 2000. Hunger, eating, and ill health. *Am. Psychol.* 55:1105–16
- Plassmann H, O’Doherty J, Shiv B, Rangel A. 2008. Marketing actions can modulate neural representations of experienced pleasantness. *Proc. Natl. Acad. Sci. USA* 105:1050–54
- Price DD, Finniss DG, Benedetti F. 2008. A comprehensive review of the placebo effect: recent advances and current thought. *Annu. Rev. Psychol.* 59:565–90
- Priester JR, Petty RE. 1996. The gradual threshold model of ambivalence: relating the positive and negative bases of attitudes to subjective ambivalence. *J. Personal. Soc. Psychol.* 71:431–49
- Priester JR, Petty RE, Park K. 2007. Whence univalent ambivalence? From the anticipation of conflicting reactions. *J. Consum. Res.* 34:11–21
- Rao A, Monroe KB. 1989. The effect of price, brand name, and store name on buyers’ perceptions of product quality: an integrative review. *J. Mark. Res.* 26:351–57
- Ratner RK, Kahn BK. 2002. The impact of private versus public consumption on variety-seeking behavior. *J. Consum. Res.* 29:246–57
- Ratner RK, Kahn BE, Kahneman D. 1999. Choosing less-preferred experiences for the sake of variety. *J. Consum. Res.* 26:1–15
- Ratner RK, Soman D, Zauberman G, Ariely D, Carmon Z, et al. 2008. How behavioral decision research can enhance consumer welfare: from freedom of choice to paternalistic intervention. *Mark. Lett.* In press
- Read D, Loewenstein G. 1995. Diversification bias: explaining the discrepancy in variety seeking between combined and separated choices. *J. Exp. Psychol.: Appl.* 1:34–49
- Revusky SH, Bedarf EW. 1967. Association of illness with prior ingestion of novel foods. *Science* 155:219–20
- Roese NJ. 1997. Counterfactual thinking. *Psychol. Bull.* 121:133–48

- Rosenthal R, Jacobson L. 1968. *Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development*. New York: Rinehart & Winston
- Rozin P, Fallon AE. 1987. A perspective on disgust. *Psychol. Rev.* 94:23-41
- Rozin P, Kalat JW. 1971. Specific hungers and poison avoidance as adaptive specializations of learning. *Psychol. Rev.* 78:459-86
- Rozin P, Millman L, Nemeroff C. 1986. Operation of the laws of sympathetic magic in disgust and other domains. *J. Personal. Soc. Psychol.* 40:703-12
- Rozin P, Nemeroff C, Wane M, Sherrod A. 1989. Operation of the sympathetic magical law of contagion in interpersonal attitudes among Americans. *Bull. Psychon. Soc.* 27:367-70
- Sahlins M. 1972. *Stone Age Economics*. Chicago, IL: Aldine
- Sande GN, Goethals GR, Radloff CE. 1988. Perceiving one's own traits and others': the multifaceted self. *J. Personal. Soc. Psychol.* 54:13-20
- Schelling TC. 1984. The mind as a consuming organ. In *Choice and Consequence: Perspectives of an Errant Economist*, pp. 328-46. Cambridge, MA: Harvard Univ. Press
- Schwarz N. 2004. Metacognitive experiences in consumer judgment and decision making. *J. Consum. Psychol.* 14:332-48
- Schwarz N, Clore GL. 1996. Feelings and phenomenal experiences. In *Social Psychology: Handbook of Basic Principles*, ed. ET Higgins, A Kruglanski, pp. 433-65. New York: Guilford
- Shafir E, Simonson I, Tversky A. 1993. Reason-based choice. *Cognition* 49:11-36
- Shirky C. 2008. *Gin, television, and social surplus*. <http://www.herecomeseverybody.org/2008/04/looking-for-the-mouse.html>
- Shiv B, Carmon Z, Ariely D. 2005. Placebo effects of marketing actions: Consumers may get what they pay for. *J. Mark. Res.* 42:383-93
- Shleifer A, Summers L. 1990. The noise trader approach to finance. *J. Econ. Perspect.* 4:19-33
- Simmons J, Nelson LD. 2006. Intuitive confidence: choosing between intuitive and nonintuitive alternatives. *J. Exp. Psychol.: Gen.* 135:409-28
- Simonsohn U. 2007. *Weather to go to college*. Work. pap., Univ. Calif., San Diego
- Simonson I. 1990. The effect of purchase quantity and timing on variety-seeking behavior. *J. Mark. Res.* 27:150-62
- Simonson I, Carmon Z, Dhar R, Drolet A, Nowlis S. 2001. Consumer research: in search of identity. *Annu. Rev. Psychol.* 52:249-75
- Sinaceur M, Heath C. 2005. Emotional and deliberative reactions to a public crisis: mad cow disease in France. *Psychol. Sci.* 16:247-54
- Slovic P. 1995. The construction of preference. *Am. Psychol.* 50:364-71
- Small DA, Loewenstein G. 2003. Helping "A" victim or helping "THE" victim: altruism and identifiability. *J. Risk Uncertainty* 26:5-16
- Small DA, Simonsohn U. 2008. Friends of victims: personal experience and prosocial behavior. *J. Consum. Res.* In press
- Smallwood J, Schooler JW. 2006. The restless mind. *Psychol. Bull.* 132:946-58
- Snyder M, Swann WB. 1978. Hypothesis-testing processes in social interaction. *J. Personal. Soc. Psychol.* 36:1202-12
- Snyder M, Tanke ED, Berscheid E. 1977. Social perception and interpersonal behavior: on the self-fulfilling nature of social stereotypes. *J. Personal. Soc. Psychol.* 35:656-66
- Staw BM. 1981. The escalation of commitment to a course of action. *Acad. Manage. Rev.* 6:577-87
- Taylor SE, Pham LB, Rivkin ID, Armor DA. 1998. Harnessing the imagination: mental simulation, self-regulation, and coping. *Am. Psychol.* 53:429-39
- Thaler RH, Sunstein CR. 2008. *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, CT: Yale Univ. Press
- Thompson DV, Hamilton RW, Rust R. 2005. Feature fatigue: when product capabilities become too much of a good thing. *J. Mark. Res.* 42:431-42
- Thompson DV, Norton MI. 2008. *The social utility of feature creep*. Work. pap., Georgetown Univ., Washington, DC

- Tian KT, Bearden WO, Hunter GL. 2001. Consumers' need for uniqueness: scale development and validation. *J. Consum. Res.* 28:50–66
- Tolin DF, Frost RO, Steketee G. 2007. *Buried in Treasures: Help for Compulsive Acquiring, Saving, and Hoarding*. New York: Oxford Univ. Press
- Trivers RL. 1971. The evolution of reciprocal altruism. *Q. Rev. Biol.* 46:35–57
- Trötschel R, Gollwitzer PM. 2007. Implementation intentions and the willful pursuit of prosocial goals in negotiations. *J. Exp. Soc. Psychol.* 43:579–98
- Tulving E. 2002. Episodic memory: from mind to brain. *Annu. Rev. Psychol.* 53:1–25
- Tversky A, Kahneman D. 1973. Availability: a heuristic for judging frequency and probability. *Cogn. Psychol.* 5:207–32
- Tversky A, Shafir E. 1992. Choice under conflict: the dynamics of deferred decision. *Psychol. Sci.* 3:358–61
- Vaughn LA, Malik J, Schwartz S, Petkova Z, Trudeau L. 2006. Regulatory fit as input for stop rules. *J. Personal. Soc. Psychol.* 91:601–11
- Veblen T. 1975 (1899). *The Theory of the Leisure Class*. New York: A.M. Kelley
- Vohs KD, Mead NL, Goode MR. 2006. The psychological consequences of money. *Science* 314:1154–56
- Waber RL, Shiv B, Carmon Z, Ariely D. 2008. Commercial features of placebo and therapeutic efficacy. *J. Am. Med. Assoc.* 299:1016–17
- Wang J, Lee AY. 2006. The role of regulatory focus in preference construction. *J. Mark. Res.* 43:28–38
- Wansink B. 2006. *Mindless Eating: Why We Eat More Than We Think*. New York: Bantam-Dell
- Wansink B, Chandon P. 2006. Can “low-fat” nutrition labels lead to obesity? *J. Mark. Res.* 43:605–17
- Wansink B, Park SB, Sonka S, Morganosky M. 2000. How soy labeling influences preference and taste. *Int. Food Agribusiness Manag. Rev.* 3:85–94
- Whittlesea BWA. 1993. Illusions of familiarity. *J. Exp. Psychol.: Learn.* 19:1235–53
- Wildschut T, Sedikides C, Arndt J, Routledge C. 2006. Nostalgia: content, triggers, functions. *J. Personal. Soc. Psychol.* 91:975–93
- Williams P, Aaker J. 2002. Can mixed emotions peacefully coexist? *J. Consum. Res.* 28:636–49
- Wilson TD, Lisle DJ, Kraft D, Wetzal CG. 1989. Preferences as expectation-driven inferences: effects of affective expectations on affective experience. *J. Personal. Soc. Psychol.* 56:519–30
- Xu AJ, Wyer RS. 2007. The effect of mind-sets on consumer decision strategies. *J. Consum. Res.* 34:556–66
- Zajonc RB. 1968. Attitudinal effects of mere exposure. *J. Personal. Soc. Psychol.* 9:1–27
- Zauberman G, Ratner RK, Kim BK. 2008. Memories as assets: strategic memory protection in choice over time. *J. Consum. Res.* In press



Contents

Prefatory

Emotion Theory and Research: Highlights, Unanswered Questions, and Emerging Issues <i>Carroll E. Izard</i>	1
------------------------------------------------------------------------------------------------------------------------	---

Concepts and Categories

Concepts and Categories: A Cognitive Neuropsychological Perspective <i>Bradford Z. Mahon and Alfonso Caramazza</i>	27
-----------------------------------------------------------------------------------------------------------------------------	----

Judgment and Decision Making

Mindful Judgment and Decision Making <i>Elke U. Weber and Eric J. Johnson</i>	53
----------------------------------------------------------------------------------------	----

Comparative Psychology

Comparative Social Cognition <i>Nathan J. Emery and Nicola S. Clayton</i>	87
------------------------------------------------------------------------------------	----

Development: Learning, Cognition, and Perception

Learning from Others: Children's Construction of Concepts <i>Susan A. Gelman</i>	115
-------------------------------------------------------------------------------------------	-----

Early and Middle Childhood

Social Withdrawal in Childhood <i>Kenneth H. Rubin, Robert J. Coplan, and Julie C. Bowker</i>	141
--------------------------------------------------------------------------------------------------------	-----

Adulthood and Aging

The Adaptive Brain: Aging and Neurocognitive Scaffolding <i>Denise C. Park and Patricia Reuter-Lorenz</i>	173
--------------------------------------------------------------------------------------------------------------------	-----

Substance Abuse Disorders

A Tale of Two Systems: Co-Occurring Mental Health and Substance Abuse Disorders Treatment for Adolescents <i>Elizabeth H. Hawkins</i>	197
---------------------------------------------------------------------------------------------------------------------------------------------------	-----

Therapy for Specific Problems

Therapy for Specific Problems: Youth Tobacco Cessation
Susan J. Curry, Robin J. Mermelstein, and Amy K. Sporer 229

Adult Clinical Neuropsychology

Neuropsychological Assessment of Dementia
David P. Salmon and Mark W. Bondi 257

Child Clinical Neuropsychology

Relations Among Speech, Language, and Reading Disorders
Bruce F. Pennington and Dorothy V.M. Bishop 283

Attitude Structure

Political Ideology: Its Structure, Functions, and Elective Affinities
John T. Jost, Christopher M. Federico, and Jaime L. Napier 307

Intergroup relations, stigma, stereotyping, prejudice, discrimination

Prejudice Reduction: What Works? A Review and Assessment
 of Research and Practice
Elizabeth Levy Paluck and Donald P. Green 339

Cultural Influences

Personality: The Universal and the Culturally Specific
Steven J. Heine and Emma E. Buchtel 369

Community Psychology

Community Psychology: Individuals and Interventions in Community
 Context
Edison J. Trickett 395

Leadership

Leadership: Current Theories, Research, and Future Directions
Bruce J. Avolio, Fred O. Walumbwa, and Todd J. Weber 421

Training and Development

Benefits of Training and Development for Individuals and Teams,
 Organizations, and Society
Herman Aguinis and Kurt Kraiger 451

Marketing and Consumer Behavior

Conceptual Consumption
Dan Ariely and Michael I. Norton 475

Psychobiological Mechanisms

- Health Psychology: Developing Biologically Plausible Models Linking
the Social World and Physical Health
Gregory E. Miller, Edith Chen, and Steve Cole 501

Health and Social Systems

- The Case for Cultural Competency in Psychotherapeutic Interventions
Stanley Sue, Nolan Zane, Gordon C. Nagayama Hall, and Lauren K. Berger 525

Research Methodology

- Missing Data Analysis: Making It Work in the Real World
John W. Graham 549

Psychometrics: Analysis of Latent Variables and Hypothetical Constructs

- Latent Variable Modeling of Differences and Changes with
Longitudinal Data
John F. McArdle 577

Evaluation

- The Renaissance of Field Experimentation in Evaluating Interventions
William R. Shadish and Thomas D. Cook 607

Timely Topics

- Adolescent Romantic Relationships
W. Andrew Collins, Deborah P. Welsh, and Wyndol Furman 631

- Imitation, Empathy, and Mirror Neurons
Marco Iacoboni 653

- Predicting Workplace Aggression and Violence
Julian Barling, Kathryne E. Dupré, and E. Kevin Kelloway 671

- The Social Brain: Neural Basis of Social Knowledge
Ralph Adolphs 693

- Workplace Victimization: Aggression from the Target's Perspective
Karl Aquino and Stefan Thau 717

Indexes

- Cumulative Index of Contributing Authors, Volumes 50–60 743

- Cumulative Index of Chapter Titles, Volumes 50–60 748

Errata

An online log of corrections to *Annual Review of Psychology* articles may be found at
<http://psych.annualreviews.org/errata.shtml>