

Research Dialogue

Building a science of spending: Lessons from the past and directions for the future

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Abstract

A decade of research suggests that people derive more happiness from buying experiences (e.g., vacations, concert tickets) than from buying material things (e.g., shoes, televisions; see Gilovich, Kumar, & Jampol, 2014, this issue). This highly impactful program of research provides a valuable model to apply in building a broader “science of spending.” By examining both the strengths and limitations of research comparing experiential and material consumption, we extract two lessons for researchers interested in studying how consumers can buy the most happiness with their money, and suggest two methodological improvements that could yield new insights into the happiness benefits of experiential and material purchases. In addition, moving beyond past research on the material/experiential distinction, we offer two fertile areas for future research in the science of spending.

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The study of consumer behavior has historically been focused on helping marketers understand consumers to help them sell their products and services (see Howard & Sheth, 1969; MacInnis & Folkes, 2010; Pham, 2013). But increasingly, researchers are moving beyond examining the factors that shape how, when, and why people buy things, focusing instead on how those things shape consumers’ happiness (e.g., Dunn, Gilbert, & Wilson, 2011; Dunn & Norton, 2013; Gilovich, Kumar, & Jampol, 2015-in this issue). This research suggests that buying *things* may not provide as much happiness as buying *experiences*, from trips around the world to romantic dinners at the local bistro. In a seminal article, Van Boven and Gilovich (2003) pioneered this area of research by providing evidence that consumers consistently derive greater happiness from experiential purchases than material purchases. This initial work spurred a decade of research, reviewed by Gilovich et al. (2015-in this issue), which fleshed out this

important idea, documenting how and why experiential purchases promote happiness. This research program provides valuable lessons that scholars can apply in building a broad and rigorous science of spending. In the pages that follow, we examine the strengths of research on material versus experiential purchases to extract two practical lessons intended to guide future work on the science of spending (part 1). Additionally, we suggest two methodological improvements that would strengthen research in this area (part 2), and we highlight two ripe areas of exploration that can advance the science of spending (part 3).

Part 1: A template for the science of spending

Talk to humans, not psychologists

When we’re talking to students, journalists, or broad lecture audiences, we usually find that they understand the distinction between material and experiential purchases, readily generating examples of this distinction at play in their own spending decisions. But sometimes our colleagues in psychology are

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more recalcitrant. After all, material purchases and experiential purchases are not inherently psychological constructs. Rather, these two spending categories differ on a host of psychological dimensions. For example, compared to material purchases, experiential purchases are more closely tied to individuals' sense of self, and this important link helps to explain why people tend to find experiential purchases more satisfying (Carter & Gilovich, 2012). But if researchers told consumers that they would benefit from making purchases that were closely linked to their own sense of self, we suspect that most consumers would be baffled by this academic advice. Thus, in order to maximize the impact of research on the science of spending, we would encourage scholars to formulate hypotheses that map on to the ways regular people actually think about their spending decisions—even if this means occasionally quarreling with colleagues over the psychological confounds that result.

Of course, thinking about spending in the way that real people think about it may sometimes mean studying spending categories that are conceptually fuzzy. As Gilovich et al. (2015—in this issue) note, the boundary between material and experiential purchases is inherently ambiguous, suggesting that people may often view purchases as possessing both experiential and material properties. Indeed, when we randomly assigned participants in a recent study to spend \$20 on an experiential or material purchase, someone in the material condition bought a book—and so did someone in the experiential condition (Weidman & Dunn, submitted for publication). This makes sense, in that a book is a tangible object ready to be stacked on a bookshelf, but it also provides the enjoyable experience of reading by a fireplace on a cold night.

Fortunately, researchers have figured out how to embrace the fuzzy boundary between experiential and material purchases (e.g., Guevarra & Howell, 2014). One of our favorite manipulations in this literature capitalizes on the ambiguity of the material/experiential distinction by randomly assigning people to think of the very same purchase, such as a boxed set of music, as either a possession or an experience (Carter & Gilovich, 2010, 2012; Mann & Gilovich, in preparation; Rosenzweig & Gilovich, 2012). Studies using this kind of manipulation show that just leading people to focus on the experiential components of a purchase can produce some of the same benefits typically associated with buying experiences. In studying the science of spending, we would encourage researchers to include manipulations like this one, which allow for a high degree of experimental control, while turning the ambiguity of real-world spending categories from a limitation into a strength.

It takes a village to elucidate a complex causal chain

Psychologists and consumer researchers hoping to submit papers to top empirical journals often strive not only to demonstrate an important phenomenon, but also to provide statistical analyses illustrating the causal mechanisms underlying the phenomenon. Recently, however, scholars have presented compelling arguments that this approach overlooks the very real

challenges associated with identifying mediators (e.g., Alba, 2012; Bullock, Green, & Ha, 2010; Spencer, Zanna, & Fong, 2005). This new way of thinking suggests that understanding a complex process is itself a complex process, which would typically benefit from the involvement of multiple labs tackling the problem from different directions over a period of years. In this regard, the research program on experiential consumption provides an instructive model. In their ground-breaking initial paper, Van Boven and Gilovich (2003) provided clear evidence for the emotional benefits of buying experiences and speculated about the causal mechanisms that might underlie these benefits, while pointing to some intriguing strands of data that were consistent with their speculations. But actually nailing down the multiple causal mechanisms underlying the emotional benefits of experiential purchases has taken about a decade. In a series of papers, researchers have tackled one mechanism at a time, carefully picking apart the role of each one, often using experimental approaches to studying mediation (e.g., Carter & Gilovich, 2010, 2012; Caprariello & Reis, 2013; Howell & Hill, 2009; Kumar & Gilovich, submitted for publication; Kumar, Mann, & Gilovich, in preparation; Kumar, Killingsworth, & Gilovich, submitted for publication; Mann & Gilovich, in preparation; Rosenzweig & Gilovich, 2012). For example, in an elegant recent paper, Carter and Gilovich (2010) presented eight studies demonstrating that one reason people get more happiness from experiential than material purchases is that they are less likely to make depressing comparisons about experiences that might have been better or cheaper than what they bought. In another paper, Caprariello and Reis (2013) showed that the social nature of experiences—from taking a ski trip with friends to visiting Disney World with family—is an essential ingredient in explaining the emotional superiority of experiential purchases. Following this model, we would encourage researchers and reviewers to accept that multiple causal mechanisms probably contribute to the emotional consequences of real-world spending choices. Thus, when breaking entirely new ground in the science of spending, it may be worthwhile to begin by simply demonstrating a phenomenon, thereby inviting other researchers to contribute to the challenging multi-year, multi-method process of understanding the causal mechanisms (cf., Alba, 2012).

Part 2: Strengthening the science of spending

Capture the moment

A single purchase can provide a variety of forms of happiness over time. As depicted in Fig. 1, the pleasure associated with any purchase can include the excitement we feel while looking forward to consumption (i.e., anticipatory value), the happiness we feel during consumption (i.e., momentary value), and the satisfaction we feel when looking back on consumption (i.e., afterglow value). As well as measuring actual enjoyment during these three phases, researchers can also measure how people remember feeling during each of these phases (i.e. remembered value). Surprisingly, despite the decade of research reviewed by Gilovich et al. (2015—in this issue), we currently know very little

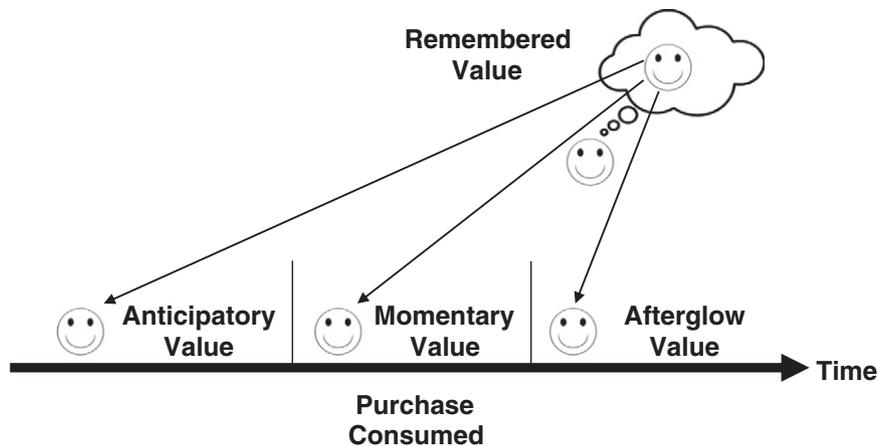


Fig. 1. Different types of value for a purchase.

about the anticipatory value and momentary value people derive from experiential and material purchases, pointing to an important direction for future research.

To examine this issue, we recently coded each individual study reviewed by Gilovich et al. (2015-in this issue) that has previously compared thoughts, feelings, or behaviors associated with experiential and material purchases (see Table 1). Of these 55 total studies, we found that only 3 (5%) examined anticipatory value, and just 2 (4%) examined momentary value.¹ In contrast, 58% examined the afterglow value of a purchase. Leaving actual value aside, 18% examined the remembered value of a purchase. In addition, 38% of studies asked people to imagine how they would feel about a hypothetical purchase or scenario; given that people make systematic errors in predicting their own future feelings (e. g., Dunn, Wilson, & Gilbert, 2003; Wilson & Gilbert, 2005), studies using hypothetical scenarios should be interpreted with a great deal of caution (unless researchers are interested in examining people's intuitions themselves, regardless of their accuracy).

As highlighted by our coding, the program of research reviewed by Gilovich et al. (2015-in this issue) has thoroughly examined the afterglow happiness people derive from experiential vs. material purchases. But our coding of the literature suggests that there is much left to be discovered about the relative benefits of material and experiential purchases in the moment. This represents an important direction for consumer researchers, given that the pursuit of momentary enjoyment is a key factor driving consumers to make purchases (Alba & Williams, 2013); we buy tickets to a concert so that we can scream with the crowd as the lead act comes onstage, and we buy a new winter coat so we can snuggle inside of it during a blizzard.

Importantly, studying momentary enjoyment may paint a different picture of the relative merits of experiential and material purchases than studying afterglow or remembered enjoyment. Psychologists have long known that people's reports of their past feelings are often inaccurate for a number of reasons (e.g., Fredrickson & Kahneman, 1993; Robinson & Clore, 2002), including the tendency to use rose-colored glasses; over time, people begin to view their past experiences increasingly positively, even if they didn't feel that much enjoyment during the experience itself (Mitchell, Thompson, Peterson, & Cronk, 1997). Using rose-colored glasses may therefore lead people to report greater remembered enjoyment associated with experiential purchases than their actual momentary enjoyment would warrant. Additionally, research suggests that afterglow enjoyment fades more rapidly for material purchases than experiential purchases (Nicolao et al., 2009). As a result, afterglow and remembered enjoyment may portray experiential purchases more favorably than material purchases, even if the two types of purchases yield similar momentary enjoyment.

Studying momentary enjoyment may also paint a more favorable picture of material purchases for a second reason: momentary enjoyment of material purchases may last longer than momentary enjoyment of experiential purchases. For example, a concert or sporting event for which one purchases tickets takes place on one day, a dinner at a new restaurant lasts only a few hours, and even a luxurious winter vacation may last only a week or two. In contrast, material purchases may provide repeated doses of momentary enjoyment over time; a new coat can keep us warm day after day for many winters and a new pair of running shoes can carry us through miles of training over many months. As a result, even if afterglow enjoyment declines faster for material than experiential purchases (Gilovich et al., 2015-in this issue; Nicolao et al., 2009), these same material purchases may continue to provide momentary enjoyment for weeks, months, or years.

To provide a first look at whether experiential and material purchases may differ in the length of time during which they provide momentary enjoyment, we randomly assigned undergraduate students to describe a past experiential or material

¹ We use the term "value" to encompass diverse dependent measures, from feeling happy to thinking that a purchase is closely related to the self-concept. Some studies examined more than one type of value.

Table 1

Study	Report type	Sample
Caprariello and Reis (2012), Study 1	Hypothetical	Students
Caprariello and Reis (2012), Study 2	Afterglow + remembered	Diverse sample of US adults
Caprariello and Reis (2012), Study 3	Afterglow + remembered	Diverse sample of US adults
Caprariello and Reis (2012), Study 4	Afterglow + remembered	MTurk
Carter and Gilovich (2010), Study 1	Afterglow + remembered	Students
Carter and Gilovich (2010), Study 2	Remembered	Students
Carter and Gilovich (2010), Study 3	Hypothetical	Students
Carter and Gilovich (2010), Study 4	Momentary	Students
Carter and Gilovich (2010), Study 5a	Hypothetical	Students
Carter and Gilovich (2010), Study 5b	Hypothetical	Students
Carter and Gilovich (2010), Study 5c	Hypothetical	Students
Carter and Gilovich (2010), Study 6	Hypothetical	Students
Carter and Gilovich (2012), Study 1	Afterglow	Students
Carter and Gilovich (2012), Study 2	Afterglow	Students
Carter and Gilovich (2012), Study 3a	Afterglow	Convenience sample of US adults
Carter and Gilovich (2012), Study 3b	Hypothetical	MTurk
Carter and Gilovich (2012), Study 3c	Hypothetical	MTurk
Carter and Gilovich (2012), Study 4	Hypothetical	MTurk
Carter and Gilovich (2012), Study 5	Afterglow	Students
Howell and Hill (2009)	Afterglow	Students
Kumar and Gilovich (submitted for publicationa), Study 1	Afterglow	Students
Kumar and Gilovich (submitted for publicationa), Study 2	Afterglow	Students
Kumar and Gilovich (submitted for publicationb), Study 1a	Afterglow + remembered	Students + convenience sample of US adults
Kumar and Gilovich (submitted for publicationb), Study 1b	Afterglow + remembered	MTurk
Kumar and Gilovich (submitted for publicationb), Study 2a	Afterglow + hypothetical	MTurk
Kumar and Gilovich (submitted for publicationb), Study 2b	Afterglow + hypothetical	Students
Kumar and Gilovich (submitted for publicationb), Study 3a	Hypothetical	Students
	Afterglow	MTurk

Table 1 (continued)

Study	Report type	Sample
Kumar and Gilovich (submitted for publicationb), Study 3b		Students
Kumar and Gilovich (submitted for publicationb), Study 4	Afterglow + remembered + hypothetical	Students
Kumar et al. (submitted for publication), Study 1	Anticipatory	Students
Kumar et al. (submitted for publication), Study 2	Anticipatory	Diverse sample of US adults + international sample
Kumar et al. (submitted for publication), Study 3	Anticipatory	Diverse sample of US adults + international Sample
Kumar et al. (in preparation), Study 1	Afterglow + hypothetical	Students
Kumar et al. (in preparation), Study 2	Afterglow + hypothetical	Students
Kumar et al. (in preparation), Study 3	Afterglow	Students
Kumar et al. (in preparation), Study 4a	Afterglow	MTurk
Kumar et al. (in preparation), Study 4b	Afterglow	MTurk
Mann and Gilovich (submitted for publication), Study 1	Afterglow	MTurk
Mann and Gilovich (submitted for publication), Study 2	Afterglow	MTurk
Mann and Gilovich (submitted for publication), Study 3	Remembered	MTurk
Mann and Gilovich (submitted for publication), Study 4	Remembered + hypothetical	MTurk
Mann and Gilovich (submitted for publication), Study 5	Hypothetical	Students
Nicolao, Irwin, and Goodman (2009), Study 1	Afterglow	Students
Nicolao et al. (2009), Study 2	Afterglow	Students
Nicolao et al. (2009), Study 3	Afterglow + momentary	Students
Rosenzweig and Gilovich (2012), Study 1	Afterglow	Students
Rosenzweig and Gilovich (2012), Study 2	Hypothetical	MTurk
Rosenzweig and Gilovich (2012), Study 3	Afterglow	Students
Rosenzweig and Gilovich (2012), Study 4	Hypothetical	MTurk
Rosenzweig and Gilovich (2012), Study 5	Hypothetical	MTurk
Van Boven and Gilovich (2003), Study 1	Afterglow	Students
Van Boven and Gilovich (2003), Study 2	Afterglow	Diverse sample of US adults

(continued on next page)

Table 1 (continued)

Study	Report type	Sample
Van Boven and Gilovich (2003), Study 3	Afterglow	Students
Van Boven and Gilovich (2003), Study 3	Hypothetical	Students

Notes: A. C. W. coded all articles, and E. W. D. verified all coding decisions.

Report type codes:

Anticipatory: People's current thoughts/feelings while looking forward to a purchase

Momentary: People's current thoughts/feelings while consuming a purchase

Afterglow: People's current thoughts/feelings while looking back on a purchase

Remembered: What people remember thinking/feeling during the anticipatory, momentary, or afterglow phases

Hypothetical: People's imagined reports of what they would think/feel during the anticipatory, momentary, or afterglow phases of a hypothetical purchase

Sample composition codes:

Students: Sample consisted entirely/predominantly of university students

MTurk: Individuals drawn from Amazon Mechanical Turk

Convenience sample of US adults: Adults drawn from one location/community (e.g., staff at Cornell University)

Diverse sample of US adults: Diverse sample of adults, drawn from across the United States spanning a wide range of demographic categories

International sample: Sample including a substantial number of people outside North America

purchase they made for over \$100, and asked them to report the number of days they spent deriving momentary enjoyment from this purchase (i.e., taking part in the life experience or using the material object). Participants reported enjoying material purchases for a median of approximately five days, compared to just one day for experiential purchases. We corroborated these findings in a second study in which participants were randomly assigned to spend \$20 on a material or experiential purchase of their choice. Those who bought a material object spent more days enjoying that purchase over the subsequent two weeks than those who bought a life experience (Weidman & Dunn, submitted for publication). These studies provide initial support for the idea that people get more lasting momentary enjoyment from material purchases than experiential purchases. More broadly, these findings highlight the value of examining the full time course of happiness that people derive from their purchases.

Move beyond studying WEIRD people

In their seminal paper, Van Boven and Gilovich (2003) presented data not only from college students, but also from a national cross-section of over 1200 Americans. This broader data set revealed that the emotional superiority of experiential purchases extended across a wide variety of demographic categories, with some important exceptions. In particular, people with low levels of education and income were less likely to report that their experiential purchases made them happier than their material purchases.

Although Van Boven and Gilovich (2003) argued that “unpacking these demographic differences is an important issue for future research,” (pp. 1196) this call to action has largely

gone unanswered. Of the 55 studies reviewed by Gilovich et al. (2015-in this issue) that have previously compared thoughts, feelings, or behaviors associated with experiential and material purchases, only 2 (4%) have used an international sample, and only 5 (9%) have used diverse sample of US adults.² In contrast, 4% have used convenience samples of US adults (e.g., staff at Cornell University), 29% have relied on samples from Amazon Mechanical Turk (MTurk), and fully 58% have relied on student samples. Meanwhile, Henrich, Heine, and Norenzayan (2010a) have provided compelling evidence that North American undergraduates “are some of the most psychologically unusual people on earth” (p. 29; for a detailed review, see Henrich, Heine, & Norenzayan, 2010b). More broadly, Henrich et al. (2010a, 2010b) argue that the psychological literature has been seriously distorted by an extreme reliance on studying people from Western, educated, industrialized, rich, and democratic (“WEIRD”) societies, and a similar overreliance on convenience samples has been a concern of consumer psychologists both past and present (e.g., Ferber, 1977; Pham, 2013). Thus, it is striking to note that none of the studies reviewed by Gilovich et al. (2015-in this issue) reported including a substantial proportion of individuals from non-WEIRD backgrounds in their samples.³

In advancing the science of spending, we would encourage researchers to move beyond these familiar samples, examining how spending decisions shape well-being in individuals from around the world, and to report full demographic information for their samples. Taking this idea seriously, our lab recently collaborated with an interdisciplinary team, including researchers in Africa, to study how generous spending (i.e., *prosocial spending*) shaped well-being in diverse areas of the world (Aknin et al., 2013). Studying broader international samples is particularly pressing as people in developing countries gain more disposable income, opening up new opportunities for discretionary spending. As economist Alan Krueger astutely noted, “Some countries do a much better job translating income gains into happiness than others” (Krueger, 2008, p. 99). Interestingly, a recent poll showed that 71% of Chinese report measuring their success by their possessions, compared to just 7% of Swedes (IPSOS, 2013). Meanwhile, rising incomes in China have failed to yield rising satisfaction (Krueger, 2008; Stevenson & Wolfers, 2008), perhaps because many Chinese are using their newfound disposable income to buy material things. It would be worthwhile to test whether the observed benefits of buying experiences emerge even in places like China, where people prioritize the pursuit of material goods. More broadly, it would be fascinating to examine whether rising incomes are more likely to give way to rising happiness in countries where people use their additional

² We omitted Van Boven, Campbell, & Gilovich (2010) from our coding, given that the studies reported in that paper all examined purchases made by others, rather than by the self. Including this paper would not have changed the broad conclusions drawn from the coding.

³ Three studies employed sampling methods that may have resulted in the inclusion of non-WEIRD individuals (Carter & Gilovich, 2012, Study 3a; Kumar et al., in press, Studies 2 and 3), but these studies did not report demographic information for non-US participants.

discretionary incomes to purchase experiences rather than material things (Dunn & Norton, 2013).

Part 3: Into new territory

Moving beyond material and experiential purchases, there is a much broader landscape of virtually unexplored topics in the science of spending just waiting to be investigated. In “Happy Money: The Science of Spending,” Dunn and Norton (2013) described this fertile landscape; building on this work, below we briefly outline two areas that we believe are particularly ripe for future research.

Time/money trade-offs

Much of daily life revolves around the trade-offs we make between time and money. Should you pay more money for a direct flight or accept a four-hour layover in Dallas/Fort Worth? Should you spend Saturday afternoon cleaning your house or pay someone to do it for you? Should you accept a job offer that comes with lots more money but also demands working on weekends? The scientific literature currently provides few answers to these common quandaries of daily life.

Following Dunn and Norton (2013), we propose that people are likely to get more happiness from their money if they use it to change the way they spend their time. For example, because socializing ranks among the most pleasant activities of the day while commuting ranks among the least pleasant (e.g., Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004), people are likely to benefit from using their money to move closer to work or good public transit—thereby enabling them to spend their evenings playing with their kids rather than fighting traffic.

Similarly, people may get a considerable boost in happiness by outsourcing their most dreaded tasks, thereby “buying time.” In 2008, Leah Busque founded a company called TaskRabbit, which enables people to outsource just about any task, from organizing the garage to picking up a six-pack of beer (Tsotsis, 2011). The success of this company suggests that it tapped into an unmet desire. But when, why, and for whom does out-sourcing promote happiness? And is it possible to over-outsource? As new technologies and innovative companies make it easier to exchange money for time, it is essential that researchers apply the tools of science to addressing these questions. Of course, in doing so, researchers must wrestle with the sometimes fuzzy definition of buying time; while paying for a housecleaner is a prototypical example of trading money for time, should purchasing pre-made meals count as buying time? Here, the existing literature on the material/experiential distinction provides an instructive example (see Part 1), by demonstrating that researchers can overcome—and even harness—the blurred lines surrounding real world spending categories.

Buying less, getting more

Many of us were poor students once. In those lean times, a \$10 meal at a restaurant—perhaps pad Thai, deep dish pizza, or

fish tacos—probably seemed like a special treat. Without you having to lift a finger, the dish arrived at your table and you savored each bite as if you were dining at a 26-point Zagat rated destination. As ages and incomes grow larger, however, one might order guacamole and a margarita along with the fish tacos, or have fish tacos every week, instead of once a month. Ironically, this abundance might undermine enjoyment by making each taco seem less like a treat (Dunn & Norton, 2013).

In a related vein, past research has examined when and how introducing variety can reduce satiation (Inman, 2001; Ratner, Kahn, & Kehnaman, 1999; Redden, 2008; see McAlister & Pessemier, 1982, for a review). This work suggests that people may appreciate having a Mars bar on Wednesday more if they ate a Snickers bar on Tuesday and a Kit-kat on Monday, than if they had been eating Mars bars all week. More radically, we suggest that the best way to enjoy a Mars bar might be to give up chocolate entirely for the preceding days. In a recent study, students were invited into the lab for a chocolate taste-test on two occasions, one week apart (Quoidbach & Dunn, 2013). During the intervening week, some of the students were instructed to abstain from eating any chocolate, while others were handed a big bag of chocolate and asked to eat as much as they could comfortably could during the week. When they returned to the lab, the students who had been given an abundant supply of candy enjoyed eating chocolate significantly less than they had a week earlier. This slow slide toward disenchantment was halted for only one group of students: those who had given up chocolate.

This finding—that people may derive more enjoyment from consuming less—stands in contrast to the whole ethos of modern consumption, from big box stores to supersized boxes of fries. Thus, we would encourage researchers to examine how people can maximize happiness while minimizing consumption. Although popular magazines bubble over with claims about the benefits of “voluntary simplicity,” scientific journals have barely weighed in on the notion that choosing to consume less can increase happiness (for an exception, see Brown & Kasser, 2005). Given the unsustainable levels of current consumption (McKibben, 2010), documenting how and when reduced consumption can promote happiness is a pressing topic for future research.

Conclusion

By demonstrating that the effects of spending decisions on consumers’ happiness can be rigorously studied, the body of research reviewed by Gilovich et al. (2015-in this issue) has laid the groundwork for a broader science of spending. Both the strengths and the limitations of this existing research provide a valuable primer for scholars interested in pursuing the science of spending. Most notably, we have highlighted the importance of studying momentary enjoyment of purchases and recruiting more diverse samples in order to enrich this science. Additionally, we have pointed to two largely unexplored areas that are teeming with important research questions. By examining how people can navigate time/money trade-offs more effectively and by studying when and why minimizing consumption can maximize happiness,

researchers may follow in the footsteps of Gilovich et al. (2015-in this issue) while blazing new trails in the science of spending.

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