

Happiness for Sale: Do Experiential Purchases Make Consumers Happier than Material Purchases?

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Previous theories have suggested that consumers will be happier if they spend their money on experiences such as travel as opposed to material possessions such as automobiles. We test this experience recommendation and show that it may be misleading in its general form. Valence of the outcome significantly moderates differences in respondents' reported retrospective happiness with material versus experiential purchases. For purchases that turned out positively, experiential purchases lead to more happiness than do material purchases, as the experience recommendation suggests. However, for purchases that turned out negatively, experiences have no benefit over (and, for some types of consumers, induce significantly less happiness than) material possessions. We provide evidence that this purchase type by valence interaction is driven by the fact that consumers adapt more slowly to experiential purchases than to material purchases, leading to both greater happiness and greater unhappiness for experiential purchases.

Psychologists (e.g., Gilbert 2006; Kahneman, Diener, and Schwarz 1999; Van Boven and Gilovich 2003), economists (e.g., Frank 1985; Veenhoven 1993), and public policy theorists (e.g., Easterlin 2003) have become increasingly interested in measuring and understanding human happiness. For psychologists, research on happiness has proved revolutionary because an overfocus on negative clinical states had omitted the positive range of human experience by focusing on what decreases pathology as opposed to what increases well-being (e.g., Aspinwall and Staudinger 2003; Seligman 2002). For economists, happiness provides a use-

ful comprehensive construct with which to analyze human welfare because "everybody wants to be happy. There is probably no other goal in life that commands such a high degree of consensus" (Frey and Stutzer 2002, vii). Consumer researchers have a stake in both of these general aims as well. When considering the transformation of consumers through purchasing (Mick 2006), it makes sense to consider not only what leads to consumer downfall (debt, drug addiction, etc.) but also what leads to an especially happy life. As with economics, consumer research can become overly atomized, measuring the effects of particular consumption episodes without a sense of the larger picture of where these episodes lead in the long run.

The specific topics addressed across happiness research have covered a wide range, from precise neurological mapping (LeDoux and Armony 1999) to cross-cultural survey-based policy recommendations (Veenhoven 1993). Some of the most compelling recent works on happiness address the issue we address in this article: the effect of particular human behaviors on subsequent happiness. This research has focused on issues such as religious activities and exercise (Mochon, Norton, and Ariely 2008), marriage and family experiences (Easterlin 2003), and gratitude (Lyubomirsky, Sheldon, and Schkade 2005).

However, there has not been much experimental exploration of an issue primary to consumer theory: how particular purchases affect happiness. As we detail later in this article,

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this gap in the literature may be due to a surprising agreement among theorists on this issue. Perhaps the theory has proved so convincing that experimentalists saw no need to test it. Dating as early as Hume (1737/1975) and through Scitovsky (1976) and Frank (1985), the sentiment has been that individuals will be happier if they spend their money on experiences (e.g., theater, concerts, and vacations) as opposed to material purchases (e.g., fancy cars, bigger houses, and gadgets). We term this the *experience recommendation*.

There is only one published empirical test of this experience recommendation. Van Boven and Gilovich (2003), using a number of clever experiments, found that their respondents did derive more happiness from positive experiential purchases when compared to positive material purchases. Our article is a long overdue experimental treatment of this issue.

In three experiments, we affirm Van Boven and Gilovich's (2003) finding, but we show that their results are limited to positive purchases. For negative purchases, experiences have no advantage over material goods, and sometimes material purchases even induce more happiness than do experiences, the opposite of the experience recommendation. We provide evidence that the experiences versus material goods distinction (as opposed to some other correlated variables) is underlying our results. For instance, a well-tested materialism scale moderates the findings in both our first and second experiments.

Moreover, in the first experimental test of hedonic adaptation rates across types of purchases, we show that individuals adapt slower to experiential purchases when compared to material purchases. This differential in adaptation rates for experiential and material purchases is the underlying mechanism for our effects. Because individuals adapt more slowly to experiential purchases, adaptation leads to both lower (for negative purchases) and higher (for positive purchases) levels of retrospective happiness for experiential versus material purchases.

THEORETICAL BACKGROUND

What Is Happiness, and How Does Purchasing Affect It?

We use the terms *happiness* and *subjective well-being* (Diener 1984) interchangeably. Other researchers (e.g., Frank 1999; Seligman 2002) have established that these terms are strongly interrelated and that ratings of happiness correlate highly with other measures of both psychological and physiological well-being (e.g., Sutton and Davidson 1997). Although measures of subjective well-being sometimes include other affective and cognitive components (e.g., satisfaction with life; Pavot and Diener 1993), happiness explains most of the variance in the subjective well-being construct (Compton et al. 1996).

Happiness is measurable, predictable, and comparable across contexts (Diener 1984; Diener et al. 1999; Gilbert 2006; Layard 2005). We follow previous researchers in characterizing happiness as an overall sense that life is good (My-

ers 1992), that life contains many positive situations and emotions (Ahuvia 2008; Lyubomirsky, King, and Diener 2005). Researchers typically measure happiness by asking people how happy they are (see Kahneman et al. 1999 for many examples) or how happy they are with a particular situation (Raghunathan and Irwin 2001) using multi-item scales.

Scitovsky (1976) suggested some years ago that purchasing may have a negative impact on happiness because consumers often buy "joyless" material possessions such as houses and cars, resulting in comfort but not pleasure. Likewise, Easterlin (2003) has proposed that investment in "pecuniary" market objects has no effect on happiness. In his essay "How Not to Buy Happiness" (2004), Robert Frank echoes these sentiments by recommending against the accumulation of "conspicuous goods" in the pursuit of happiness. These recommendations lead us to wonder, by encouraging people to buy more things, are marketers encouraging them toward a less happy life?

Most of the writers who discuss the negatives of material goods nevertheless do suggest that some types of purchases may increase happiness. Scitovsky (1976) argues for cultural experiences such as vacations and concerts to provide pleasure. Thought exercises based on adaptation studies argue that consumers might be happier trading their material wealth (e.g., a percentage of the square footage of their house) for a more pleasant day-to-day lifestyle (e.g., a more pleasant commute) and more enjoyable experiences throughout the year (e.g., more vacation time; Frank 1999). In his book, *The Happiness Hypothesis* (2006, 101), Jonathan Haidt suggests that people should, "accumulate less, and 'consume' more . . . vacations, and other enjoyable activities." In other words, there is a suggestion that purchases of material goods (e.g., cars, houses, furniture) should, overall, lead to less happiness compared to purchases of experiential goods (e.g., vacations, concerts, sporting events). We call this suggestion "the experience recommendation." Besides appearing in the writings outlined above, this recommendation has been established empirically (Van Boven and Gilovich 2003) and can be traced back to Hume (1737/1975, 283), who extols experiences (e.g., theater) as superior to "the acquisition of worthless toys and gewgaws."

What distinguishes material from experiential purchases? Material purchases are tangible; they may be taken from place to place, they last beyond a couple of days, and they take up physical space. Stereos, cars, and houses are examples of material goods. Experiential purchases are not tangible. Rather, the purchase entitles the consumer to an event that is finite in time. Movies, amusement parks, and restaurant dinners are examples of experiential purchases. The material/experiential distinction is a continuum. For some purchases, for some consumers, locating particular purchases on the continuum may be difficult. However, the findings of Van Boven and Gilovich (2003) and the intuitions of many others (e.g., Easterlin 1995; Pine and Gilmore 1999; Scitovsky 1976) suggest that this distinction exists and that consumers can easily discriminate between the two types of purchases. Future research will likely uncover ad-

ditional subtleties relevant to these two categories of purchases (e.g., performance characteristics [Deighton 1992], vividness, degree of social interaction, memory distortions), but for now we concentrate on this basic distinction and terminology. Doing so allows us to speak to the experience recommendation and to link our work with previous work in the area.

Happiness, Consumption, and the Hedonic Treadmill

In addition to documenting and testing the experience recommendation, we propose and test an underlying mechanism for our findings. We suspect that purchase type affects the "hedonic treadmill" (Brickman and Campbell 1971; Raghunathan and Irwin 2001), the adaptation mechanism that integrates positive purchases into the decision makers' reference point, shifting the purchase into the status quo instead of a gain (Kahneman, Knetsch, and Thaler 1991; Samuelson and Zeckhauser 1988). Experiences might be less susceptible to this treadmill; people continue to enjoy past pleasant experiences via memories (Frederick and Loewenstein 1999; Van Boven and Gilovich 2003), and experiences may have more of a lasting impact on one's life (Frank 2004; Scitovsky 1976).

The hedonic treadmill is driven by hedonic adaptation (Frederick and Loewenstein 1999), which refers to the lessening of a hedonic response over time. Better things become less good over time, and worse things become better. Note that there are two general classes of work on hedonic adaptation (see Frederick and Loewenstein [1999] for many examples of each): measuring adaptation to a continually repeating stimulus (e.g., traffic noise [Weinstein 1982] or incarceration [Wormith 1984]) and measuring adaptation to a stimulus that occurs once (e.g., buying a luxury good [Frank 1999]). Our work focuses on the latter, which is more relevant to most marketing contexts, matches the discussions of adaptation in most of the happiness literature, and fits more closely with the experience recommendation.

Others have suggested that hedonic adaptation rates may vary by type of stimuli. For instance, Van Boven (2005) surmises that people may tend to adapt faster to material purchases because (positive) experiential purchases remain open to positive reinterpretation (Mitchell et al. 1997). As a consequence, memory keeps the experiences from declining in happiness over time. Likewise, in their review of adaptation rates, Frederick and Loewenstein (1999) find that people show very little adaptation both to certain positive experiences such as plastic surgery and certain negative experiences such as loss of a loved one, whereas adaptation to material gains such as a particular increase in income is quite rapid. In a chapter of his book *Luxury Fever* entitled "Gains That Endure," Frank (1999, 88) considers whether some purchases might provide slower adaptation than luxury goods, which, he argues, place consumers on an endless hedonic treadmill. He focuses on experiences such as vacations, saying: "Provided they are of sufficient duration,

vacations have been shown to have restorative effects that persist long after people return to work." The one-time purchase of a vacation may lead to slower adaptation over time, and thus more happiness, than spending a similar amount on a luxury object.

We agree with this supposition, and we expand it to suggest that, in general, people adapt to experiences, on average, more slowly than to material purchases. Note that we apply this proposition both to negative and positive purchases: hedonic adaptation would result in a positive experience inducing more happiness but a negative experience inducing less happiness than the comparable material purchase with the same initial happiness level. In our third experiment, we directly test hedonic adaptation rates over time, by purchase type and valence, and we show that hedonic adaptation underlies our primary finding. In other words, we propose (and show) that hedonic adaptation, by reducing the unhappiness with negative purchases as well as the happiness with positive purchases at different rates across purchase type, results in concomitant differences in retrospective happiness. Furthermore, we show that this adaptation happens quite quickly, often in a matter of minutes. Our work is the first (that we know of) to test for happiness with both positive and negative experiential/material purchases and also the first to explicitly test purchase-type adaptation differences in time.

Thus, we experimentally address three components of the experience recommendation: (1) whether/when the recommendation is appropriate, (2) whether the appropriateness of the recommendation depends on consumer characteristics such as materialism, and (3) the mechanism underlying the appropriateness of the experience recommendation.

EXPERIMENT 1

This experiment tested whether outcome valence moderates the effect of purchase type on happiness. Respondents first recalled a purchase (positive or negative, and material or experiential) and then indicated their retrospective happiness with the purchase. We expected the experience recommendation to hold for positive purchases but not for negative purchases.

In addition, we measured respondents' level of *materialism*, which is defined as attachment to material possessions, including an enmeshed relationship between the ownership of objects and one's sense of self (Richins and Dawson 1992, 308). Although researchers have addressed the societal and personal impact of materialism (many of them arguing that it has a negative influence [e.g., Burroughs and Rindfleisch 2002; Kasser 2002]), for our purposes the measure of materialism allows us to affirm our material/experiential continuum by isolating consumers for whom material purchases are especially important versus especially unimportant. As materialism increases, the adaptation rates for material purchases (both positive and negative) should decrease; material purchases should resonate longer for materialistic consumers, affecting happiness more. Thus, we expected a three-way interaction between materialism, va-

lence, and purchase type: the valence by purchase type interaction should grow stronger as materialism decreases.

Method

A total of 211 undergraduates from various colleges at the University of Texas at Austin participated in the experiment in exchange for extra credit. We asked respondents to recall a personal purchase. There were four between-subjects conditions: the purchases were either experiential or material, and they were either positive or negative. For the material purchases, we asked respondents the following:

Please describe a time when you spent about \$300 on an object. You kept the object for some time and may even still have it. It was an object you could touch with your hand. You bought the object to increase your happiness.

For the experiential purchases, we asked the following:

Please describe a time when you spent about \$300 on an experience. In other words you did not end up with anything tangible (anything you could hold in your hand) at the end of the experience except for your memories. You bought the experience to increase your happiness.

We adapted these instructions from Van Boven and Gilovich (2003), with more neutral wording to accommodate our positive and negative conditions (Van Boven and Gilovich solicited memories of purchases around \$50, and in an unreported test of our two-way interaction we replicated our results with this amount as well). The outcome valence was manipulated in the last sentence of the instructions: “And, it turned out well and you did enjoy the purchase” versus “Unfortunately, it did not turn out well and you did not enjoy the purchase.” For the material purchases, we instructed participants that the purchases could not be sold or given away, so that any confound with potential resale was eliminated.

Next, respondents rated their purchase on three 7-point happiness scales adapted from Van Boven and Gilovich (2003): “When you think about this purchase, how happy does it make you?” (Not Happy–Moderately Happy–Very Happy), “How much does this purchase contribute to your happiness in life?” (Not at All–Moderately–Very Much), “To what extent do you think the money spent on this purchase would have been better spent on something else—some other type of purchase that would have made you happier?” (Not at All–Moderately–Very Much). These measures formed one scale ($\alpha = .86$). (In all three studies the first two questions were highly correlated [$r > .9$], and using only the first measure resulted in the same results as using all three.) In addition, we asked respondents how much they spent and how many months ago they made the purchase. After the happiness task, participants answered the nine-item version of “The Material Values Scale” (MVS; Richins 2004), which we combined into one measure ($\alpha = .84$).

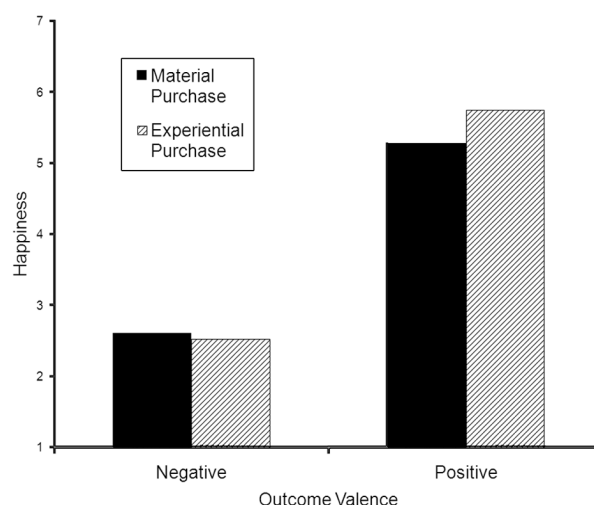
Results and Discussion

Twenty-one participants reported the wrong purchase valence and were dropped from the analyses. These participants reported positive purchases when asked for negative purchases and vice versa. The likelihood of not following the instructions was not influenced by the conditions of this experiment ($\chi^2 < 1.5$, NS).

Overall, we did not find support for the experience recommendation: there was not a reliable relationship between the material versus experiential variable and reported happiness with the purchases ($F(1, 185) = 1.95$, NS). As we expected, the effect of purchase type was significantly moderated by the outcome valence of the purchase ($F(1, 185) = 3.85$, $p < 0.05$, $\eta^2 = .02$; see fig. 1). When we fit the “Happiness = Purchase Type” model at each level of purchase outcome valence (Irwin and McClelland 2001), we replicated the experience recommendation for positive purchases: experiential purchases induced more reported happiness ($M = 5.75$) than did material purchases ($M = 5.27$; $F(1, 185) = 5.53$, $p < 0.05$). If the purchase did not turn out positively, however, the effect did not hold. Fitting the model for the negative purchases, there was not a significant difference in happiness between experiential ($M = 2.52$) and material purchases ($M = 2.60$; $F(1, 185) = .16$, NS). Note that the difference in effect across valence is unlikely to be due to statistical power; if purchase type had significantly affected happiness with negative purchases, the effect would be in the opposite direction from the effect for positive purchases. Thus, positive outcomes result in a different pattern of results from negative outcomes. Controlling for the purchase amount and the time since the purchase negligibly affected the interaction results ($F(1, 171) = 3.39$) when controlling for amount and ($F(1, 184) = 3.69$) when controlling for time,

FIGURE 1

MEAN HAPPINESS RATING BY OUTCOME



and a Sobel test showed that amount paid and time since purchase did not reliably mediate the results (t 's < 1.65, p 's > .10). Thus, the interaction cannot be explained by differences in market value of the purchase types or by differences in recall of the happiness afforded by the two types of purchases over time.

Although there was not a main effect of materialism on happiness with the purchase ($F(1, 181) < 1$, NS), this construct moderated the valence by purchase type interaction ($F(1, 181) = 6.06$, $p < .05$). To interpret this three-way interaction, we fit the valence by purchase type model at two levels of materialism, low (one standard deviation below the mean) and high (one standard deviation above the mean). As the top graph in figure 2 shows, the consumers lower on materialism showed a particularly strong version of the purchase type by happiness interaction ($F(1, 181) = 9.81$, $p < .001$). Fitting the model both at low materialism and at each level of valence shows that experiential purchases led to more happiness if there was a positive outcome ($F(1, 181) = 6.81$, $p < .001$) but that material purchases led to marginally more happiness if there was a negative outcome ($F(1, 181) = 3.03$, $p < .08$). For less materialistic consumers, switching valence resulted in a switch in the effect of purchase type on happiness.

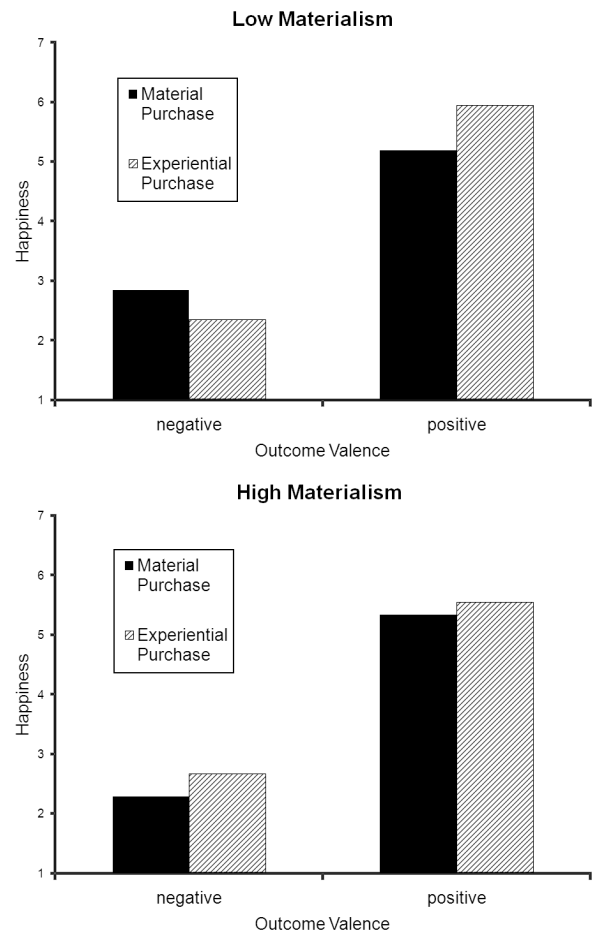
For more materialistic consumers (see bottom graph of fig. 2), purchase type also did not influence happiness overall ($F(1, 181) < 1$, NS). There was a main effect of outcome valence for these consumers, but they showed neither a product type main effect nor the interaction we found in previous studies ($F(1, 181) < 1$, NS). For negative outcomes, the more materialistic respondents were just as unhappy with material purchases as with experiential purchases (presumably their high hopes for material purchases were dashed). For positive outcomes, material purchases resonate just as much as experiences for more materialistic respondents because they are just as happy with the positive material possessions. The results provide support that it is indeed the material-experiential dimension that is responsible for our purchase type effects across the experiments.

EXPERIMENT 2

In experiment 1, we gave participants specific instructions to recall either a material or an experiential purchase. This design assumes that material and experiential purchases are equally accessible to memory and that they are equally associated with negative and positive outcomes. Experiment 2 instead measures associations between purchase type and outcome valence that occur naturally in consumers' memories, without any prompting for one kind of purchase or another. We asked individuals to freely recall three different purchases and then to rate each one on a material-experiential continuum. Thus, this method is more reflective of the likely continuous nature of the experiential/material construct.

This experiment also rules out the possibility that chronic happiness underlies our results by measuring Satisfaction with Life (Pavot and Diener 1993) before the primary task, with a 10-minute filler task in between. These Satisfaction

FIGURE 2
PURCHASE TYPE BY OUTCOME VALENCE BY MATERIALISM INTERACTION



with Life scores did not have any main effects or interactions with the happiness measure, and therefore they will not be discussed further.

Method

We randomly assigned 198 undergraduate and MBA students from the University of Texas at Austin to either the positive or negative purchase conditions. Participants recalled three purchases that turned out either well (positive condition) or poorly (negative condition) and then briefly described the purchases. Afterward, they were given the same definitions of purchase type used in our first experiment and were asked to rate each of these purchases on a 7-point scale, anchored by "completely material" and "completely experiential." Following the ratings questions, participants received the same three happiness questions and the MVS (Richins 2004) used in the previous experiment.

Results and Discussion

All participants reported three purchases, rated them on the experiential or material purchases continuum, and then rated the purchases on the happiness scales. Thus, we employed a two-step hierarchical analysis. In the first step, we regressed each of the three happiness scores onto the three purchase classification ratings for each participant. This model provided us with slopes (one per participant) describing the influence of purchase type (material vs. experiential) on individual levels of happiness with the purchase. In the second step, we regressed these happiness by purchase type slopes onto the valence of the outcome condition, as well as the materialism scale and their interaction. This final model captures the effect of materialism, valence, and their interaction on the relationship between purchase type and happiness. In other words, does the influence of purchase type on happiness depend on valence? And does this dependency differ by materialism? Figure 3 plots these results. The y-axis represents the influence of purchase type on happiness, where the more positive the number, the greater the influence of experiential purchases on happiness. Conversely, the more negative the number on the y-axis, the greater the influence of material purchases on happiness.

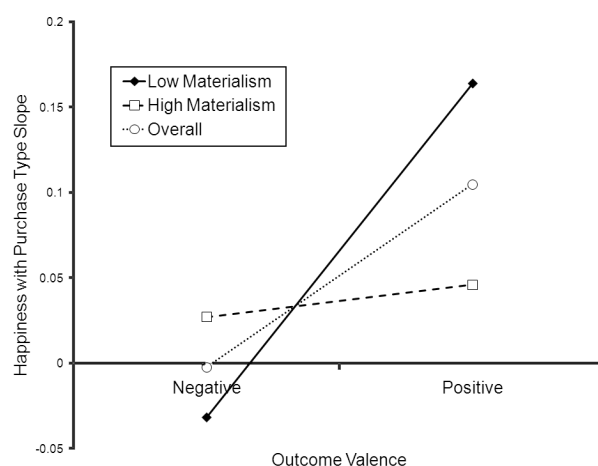
Memory for material versus experiential purchases did not differ by valence: respondents did not recall experiences or material purchases more in the positive versus negative conditions ($F(1, 192) = 1$, NS). Replicating the results in our previous experiments, the “overall” line shows that the relationship between happiness with the purchase and purchase type was significantly predicted by purchase valence ($F(1, 192) = 6.22$, $p < .05$, $\eta^2 = .03$). For positive purchases, happiness was positively related to how experiential the purchase was ($M_{\text{slope}} = .104$, $F(1, 192) = 12.69$, $p < .001$). For negative purchases, there was no relationship between happiness and purchase type ($M_{\text{slope}} = .0001$; $F(1, 192) < 1$, NS).

As in experiment 1, there was a marginally significant interaction between outcome valence and materialism ($F(1, 192) = 3.57$, $p = .06$). At a low level of materialism (one standard deviation below the mean) experiences led to more happiness than did purchases of material possessions but only if the outcome turned out positively ($F(1, 192) = 9.53$, $p < 0.05$). However, for individuals with high levels of materialism (one standard deviation above the mean), experiential and material purchases did not differentially affect happiness, regardless of the valence of the outcome of the purchase ($F(1, 192) < 1$, NS).

Note that the results from this experiment are especially conservative. We allowed respondents to freely recall any purchases that came to mind. This design allows us to make stronger claims about the experience recommendation because it mimics the consumer’s process when remembering a positive (or negative) purchase without any constraint as to the type of purchase.

FIGURE 3

PURCHASE TYPE ON HAPPINESS SLOPES BY
VALENCE AND MATERIALISM



NOTE.—Higher values in the y-axis denote greater happiness with experiential purchases.

EXPERIMENT 3

Experiments 1 and 2 showed that the effect of purchase type on happiness depends on the purchase outcome. However, we have not directly tested our proposed mechanism for this effect. Previously we suggested that adaptation differences drive this interaction. People adapt more slowly to experiences than to material purchases and, as a consequence, happiness is mitigated less over time for experiences than for material purchases. In experiment 3, participants were given the chance to choose an actual product (material purchase) or experience (experiential purchase). We then measured their happiness with the purchase, using the same happiness measures that have been used throughout our studies. We collected the ratings (1) immediately following consumption of the chosen option, (2) 7 minutes later, (3) 1 day later, (4) 1 week later, and (5) 2 weeks later.

Method

Three hundred fifty-five students from the University of Texas at Austin participated in this experiment in exchange for extra credit in an introductory marketing course. Each participant was assigned (without their knowledge) to either a “material purchase” or an “experiential purchase” condition. In the experiential condition, the participants were told that they could use three “lab dollars” to purchase one experience from a set of three possible options (a video clip, a song, or a video game) to consume (i.e., watch the video, listen to the song, or play the video game) in the lab session. The three items presented to the respondents were chosen randomly from a pool of seven possible experiences (two video clips, two songs, and three video games) and were each priced at \$3. After the choice task, participants watched

the video, listened to the song, or played the video game in the experiential purchase condition. Once the experience was over, participants answered the same three-item happiness scale used in our previous studies. Then, participants took a 7-minute break. More specifically, the experimenter made the following announcement, "We are going to have a 7-minute break in this session. During this break, you can do anything you want. The lab door will remain open, so you can come and go at your will." This break provided us with the first adaptation period.

After the 7-minute break, participants answered the same set of dependent measures used in the first part of the study (before the break). They saw the following instructions:

We are going to ask you some final questions about your choice of a [their choice]. We know we asked these questions earlier. However, we are interested in your answers to them now (your answers may be different or they may be the same).

The participants were then debriefed with instructions to answer the follow-up questionnaires. The follow-up questionnaires were collected through the Internet 1 day, 1 week, and 2 weeks after the in-lab experimental session. Each follow-up questionnaire consisted of a brief introduction reminding our participants of the in-lab study, without any reference to the options from which they had chosen. Following this introduction, participants responded, via e-mail, with (1) a description of what they had chosen (to check that they remembered what they had chosen, which all of them did) and (2) their answer to the same happiness scale question used in our lab sessions.

Individuals in the material purchase condition went through the same procedure used in the experiential purchase condition except that they chose to "purchase" one item from a group of three products (instead of three experiences), randomly sampled from a set of seven options (a set of pencils, a can holder, a keychain, a ruler, a deck of cards, a screwdriver, and a small picture frame). The items all had retail prices close to \$3.00 (the amount the participants were "charged" in lab dollars for the purchase). After the choice, participants in the material purchase condition received their product and were told they could take this product home with them.

Results and Discussion

We had 100% response rates for dependent measures collected immediately after choice and 7 minutes after choice (i.e., the adaptation rates collected in the lab). Response rates were 83.3% for dependent measures collected the day after, 69.8% for the week after, and 61.1% for 2 weeks after choice. A hazard regression indicated that response rates were not influenced by our between-subject type of purchase manipulation ($\chi^2(1) \leq 1$, NS). In other words, purchase type did not affect response rates. In addition, there was variance in the choice of experiences and material goods; the choice probabilities for the seven experiences were .26,

.22, .19, .13, .11, .09, and .05, and for the seven material goods they were .30, .21, .20, .14, .08, .07, and .03.

As in our previous studies, these data had two between-subjects variables: purchase type (which was manipulated) and purchase valence (which was measured). In addition, we had a within-subject longitudinal variable, time since purchase. Consistent with many (if not most) longitudinal data of psychological responses (e.g., Drew and Abbott 2006), our data followed a power law function:

$$y = ax^k. \quad (1)$$

In figure 4, parts *A* and *B* depict happiness scores for material and experiential purchases, respectively, over time (in minutes) by the initial happiness scores (which we term the "set points"). The set points are the continuous measure of the purchase valence (positive to negative). As the figure shows, we obtained a classic power function shape, with most of the change happening in the first time periods. The average AIC (Akaike Information Criterion, for which lower values indicate better model fit) across set point was -21.08 for the power law model, -14.29 for a quadratic model, and -11.08 for a linear model.

The proper analysis for the data is a hierarchical mixed design model that first captures the longitudinal effects and then tests for differences in these effects by the between-subjects variables. The first step captured the power function by using the standard $\log(y) = \log(x)$ model (the power function becomes linear when transformed in this way). Thus, for our model we regressed log-transformed happiness scores onto the log-transformed time since choice. Time since choice was measured in minutes—1, 7, 1,440 (1 day), 10,080 (1 week), and 20,160 (2 weeks) minutes after the choice.

This step calculates a slope for each respondent reflecting the effect of elapsed time on happiness with the choice (note that the slope from this model corresponds to the exponent in the power function).

$$\log(\text{happiness}) = \beta_0 + \beta_{1i}x_{\log(\text{time})} + \text{error}. \quad (2)$$

The resulting individual slopes were then regressed onto type of purchase (experiential vs. material purchases), each individual's set point, and the interaction between both variables:

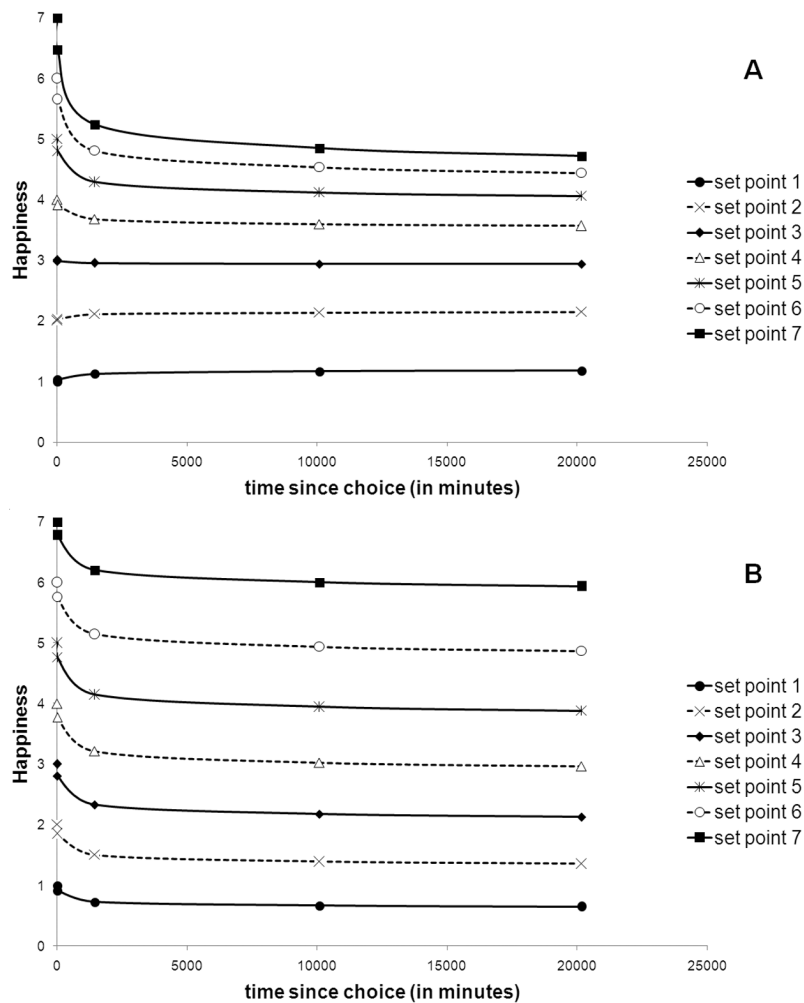
$$\begin{aligned} \beta_{1i} = & \beta_0 + \beta_a x_{\text{type of purchase}} + \beta_b x_{\text{set point}} \\ & + \beta_c (x_{\text{type of purchase}} \times x_{\text{set point}}) + \text{error}. \end{aligned} \quad (3)$$

Thus, in this model we test for different adaptation rates for experiential and material purchases as well as our purchase type by valence interaction.

This regression confirmed that the relationship between time since choice and happiness (β_{1i}) is moderated by type of purchase and initial happiness with the choice ($F(1, 245) = 14.50$, $p < .001$). Figure 5 helps explicate this interaction (using the methods described in Irwin and McClelland [2001]). Part *A* of the figure plots (log) happiness

FIGURE 4

HAPPINESS WITH MATERIAL PURCHASES OVER TIME IN MINUTES (A) AND
HAPPINESS WITH EXPERIENTIAL PURCHASES OVER TIME IN MINUTES (B)



scores for choices made in the material purchase condition by (log) time since consumption. Each line corresponds to a model fit at different set points (1, 2, 6, and 7, where 1 is the lowest happiness score and 7 is the highest). Part B presents the analogous data for experiential purchases.

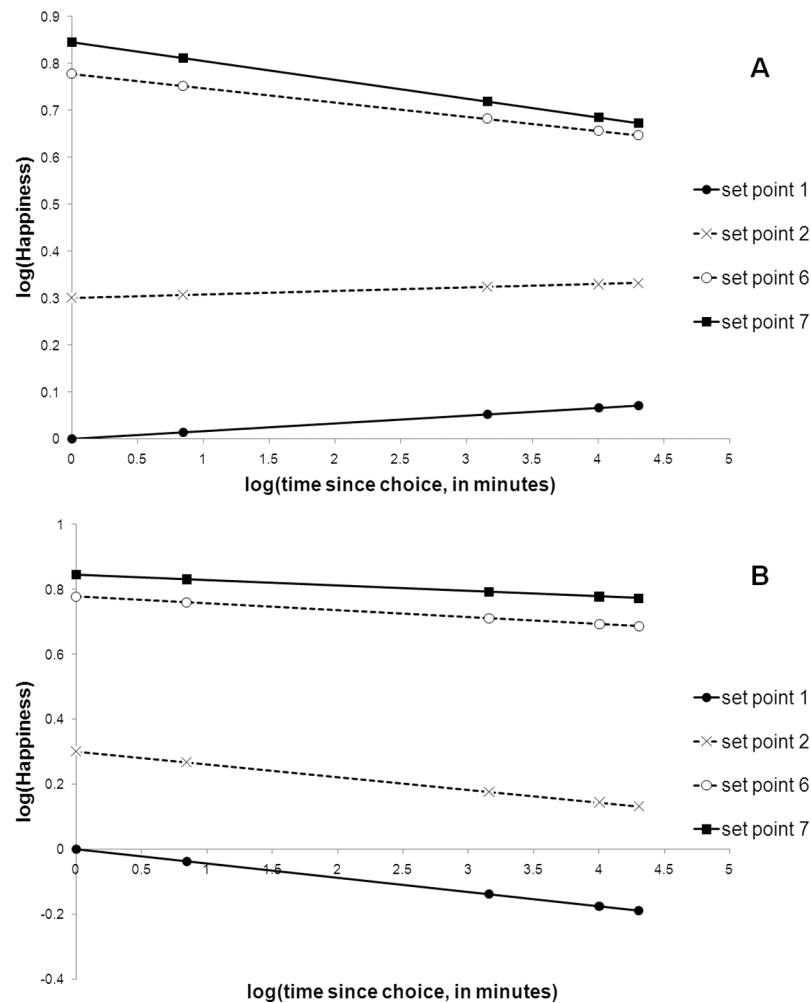
As the figure shows, the slopes are steeper in the material than in the experiential conditions ($F(1, 245) = 4.83$, $p < .05$), showing that material purchases indeed show faster adaptation than experiential purchases. In fact, in this data we do not see much adaptation at all for particularly negative purchases. As Frederick and Loewenstein (1999) explain, some situations do not induce adaptation, and sometimes they induce sensitization (increased sensitivity over time). Perhaps some negative experiences are of this nature, although of course we hesitate to make too much of this possible sensitization apart from noting that it is evocative (and consistent with our expectation of lack of adaptation to experiences).

To underscore the effect these adaptation differences have on subsequent happiness, we tested the effects of purchase type and set point (valence of the outcome, i.e., the interaction originally described in our previous studies) across the different points in time. When the model is fit (Irwin and McClelland 2001) at time 2 (7 minutes after the choice), there is not an interaction between type of purchase and valence of the outcome ($F(1, 245) < 1$, NS). However, as time passes, this interaction appears ($F(1, 245) = 8.14$, $F(1, 245) = 9.58$, and $F(1, 245) = 9.96$; all p 's $< .05$) for measures taken 1 day, 1 week, and 2 weeks after the lab session, respectively. This set of results not only replicates our retrospective happiness findings from previous studies but also supports our contention that hedonic adaptation is driving the effects.

Note that the stimuli in this study were nested under the material and experiential categories. There are pros and cons to nested designs in this context. Although participants chose

FIGURE 5

LOG(HAPPINESS) BY LOG(TIME) IN MATERIAL PURCHASE CONDITION (A) AND
LOG(HAPPINESS) BY LOG(TIME) IN EXPERIENTIAL PURCHASE CONDITION (B)



from among a wide variety of potential purchases and no particular purchase dominated choice within the two purchase types, as in all nested designs the material/experiential classification is confounded with the particular choices within the two categories. The benefit of a nested design, which probably explains its popularity in marketing research, is that the items naturally embody the categories (i.e., games actually are experiences; rulers actually are material goods).

GENERAL DISCUSSION

In order to test the experience recommendation, we measured retrospective happiness with material and experiential purchases by valence, and we found that experiences tend to produce both more (for positive purchases) and less (for negative purchases) happiness than do material purchases.

In addition, we mapped actual hedonic adaptation across time for material and experiential purchases, and we found that adaptation happens more quickly for material purchases than for experiential purchases. Thus, it is not surprising that experiences end up inducing a wider variance of happiness. We even showed that, after only a day of adaptation, purchases that started at the same level of rated happiness had diverged enough to induce a purchase type by valence interaction in retrospective happiness ratings.

Our results replicate those of Van Boven and Gilovich (2003), showing that, for positive purchases, experiences lead to greater happiness than material purchases. Also, there is a sense in which our results support the experience recommendation because we show that on average the most happiness obtained through purchasing is likely to be obtained through experiential purchases that turn out well. However, the experience recommendation in its pure form

is incomplete. Our findings suggest that a lifetime of negative experiential purchases might lead to quite an unhappy life and furthermore that negative material purchases may not leave as much of a negative mark.

Why are there different adaptation rates across purchase types? The answer may lie in the human condition. The General Social Survey has consistently suggested that marriage and family experiences increase happiness and the negatives of those experiences (divorce, death of a loved one) have the opposite effect (Easterlin 2003). In his review of the correlates of happiness, Argyle (1999) finds that positive social interaction is a major source of happiness; many experiential purchases involve activities with other people, including family. In addition to social interaction, the accomplishment of goals and the ability to be lost in a task (Csikszentmihalyi and Csikszentmihalyi 1988) seem to be correlated with happiness. Even solitary experiential purchases, such as the purchase of an on-line game, allow for the possibility of this kind of flow. In addition, Argyle (1999) shows in his meta-analysis that exercise increases happiness. Although it is a less common component of experiential purchases than social interaction and active engagement, exercise nevertheless may vary by the experiential/material distinction (e.g., walking around an amusement park or zoo vs. sitting in a car). Thus, positive experiences may be correlated with the basics of human happiness, and negative experiences may represent the thwarting of these basics. Adaptation may be slower for many experiences for this reason; future research can show whether experiential purchases are a proxy for more fundamental human needs.

In addition, there are several psychological findings that corroborate (and may underlie) our adaptation results. For instance, experiences may be more self-involving than material goods on average (Van Boven 2005). Research also has suggested that positive experiences not only live on in memories but also lend themselves to even more positive reinterpretations over time as the negative aspects of them fade (Mitchell et al. 1997; Van Boven 2005; Van Boven and Gilovich 2003). Thus, positive experiences resist adaptation and remain more positive over time. It is not clear how this mechanism would affect negative experiences, but Mitchell et al. (1997) acknowledge that perhaps negative experiences are framed even more negatively as time passes.

Our results evoke many such possibilities, and future research can address all of these subtleties. In the process, future research is likely to uncover subcategories of the material/experiential distinction and to find that demographics such as age and gender influence the effect of product type on happiness. We are particularly interested in the ways in which memory differences might underlie the material/experiential distinction, and we believe that memory may be an important subconstruct of this continuum. Also, in our work we did not make subtle distinctions between constructs such as life satisfaction, happiness, quality of life, and so forth. However, we should acknowledge that some researchers distinguish among these terms, for instance, using satisfaction with life as a more cognitive judgment of

how well life is going (Diener et al. 1999). Future explorations of this topic might profitably identify how different conceptualizations of happiness are related to purchase type.

Our research does not address the general question of whether accumulated purchase patterns affect overall happiness. There also remain unanswered questions about the relationship between materialism and the experience recommendation. For example, if the material/experiential distinction applies to consumption as well as to products (Holt 1995), then it may be possible to consume experiences materialistically and vice versa.

In addition, future explorations could directly contrast the more atomic judgments of purchases (e.g., ratings of effectiveness, satisfaction with the purchase, intent to repurchase within the brand, and quality) that are common in marketing research with the global happiness judgments we measure. One interesting component of this comparison is the potential inconsistency between what people believe they want and what actually makes them happy. As Daniel Gilbert (2006) writes in his book, *Stumbling on Happiness*, humans spend much of their time trying to behave in ways that will make their future selves happy. Why do we guess wrong so often? Applied to the marketplace, perhaps initial judgments and affective responses to products are not particularly predictive of how these products might contribute to happiness in the long run.

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