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To Do, to Have, or to Share? Valuing Experiences Over Material Possessions Depends on the Involvement of Others

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Recent evidence indicates that spending discretionary money with the intention of acquiring life experiences—events that one lives through—makes people happier than spending money with the intention of acquiring material possessions—tangible objects that one obtains and possesses. We propose and show that experiences are more likely to be shared with others, whereas material possessions are more prone to solitary use and that this distinction may account for their differential effects on happiness. In 4 studies, we present evidence demonstrating that the inclusion of others is a key dimension of how people derive happiness from discretionary spending. These studies showed that when the social–solitary and experiential–material dimensions were considered simultaneously, social discretionary spending was favored over solitary discretionary spending, whereas experiences showed no happiness-producing advantage relative to possessions. Furthermore, whereas spending money on socially shared experiences was valued more than spending money on either experiences enacted alone or material possessions, solitary experiences were no more valued than material possessions. Together, these results extend and clarify the basic findings of prior research and add to growing evidence that the social context of experiences is critical for their effects on happiness.

Keywords: experiential buying, social experiences, solitary experiences, happiness, consumer behavior

Happiness is only real when shared.

—Jon Krakauer, *Into the Wild*

A recent article by Dunn, Gilbert, and Wilson (2011) begins with the proposition that “if money doesn’t make you happy, then you probably aren’t spending it right” (p. 115). In part, they base this statement on research showing, at best, modest correlations between money and happiness (Deaton, 2008; Diener & Biswas-Diener, 2002; Easterlin, 1974; Frank, 1999; Howell & Howell, 2008; Scitovsky, 1976; but see Lucas & Schimmack, 2009). Growing interest in the association between money and happiness and the possibility that certain kinds of spending may be more closely

linked to happiness than other kinds have led researchers to ask what kinds of spending are most likely to promote happiness.

In a series of seminal studies, Van Boven and Gilovich (2003) found that people reported greater happiness after spending their discretionary money on life experiences rather than on material possessions. They defined life experiences as “events or series of events that a person lives through” (p. 1194) such as a vacation abroad, a night out on the town, or an afternoon at a local café, rather than things obtained and “kept in one’s possession” (p. 1194). This effect was replicated in a representative national sample of Americans for both hypothetical and actual purchases and was not a result of social desirability bias (Van Boven & Gilovich, 2003). The effect has been established experimentally and replicated in other samples (e.g., Howell & Hill, 2009; Nicolao, Irwin, & Goodman, 2009). Thus, as Van Boven and Gilovich (2003) concluded, “individuals will live happier lives if they invest in experiences more than material possessions” (p. 1201).

Why might this be the case? Research thus far has focused on the direct effects of experiences and possessions, suggesting that certain properties of trips to Disney World may affect happiness in ways that differ from the properties of Rolex watches. Compared with material possessions, experiences are more prone to favorable abstract construal (Van Boven, 2005), are more likely to satisfy psychological needs (Howell & Hill, 2009), figure more prominently in people’s self-narratives (Carter & Gilovich, 2012), and have longer lasting hedonic qualities (Nicolao et al., 2009). Experiences also tend to be reconstructed favorably in memory, more so than during the actual experience (Mitchell, Thompson, Peterson, & Cronk, 1997). Furthermore, even after money has been spent, satisfaction with material things, compared with experiences, is more likely to be undermined by considering the options that were

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not purchased (Carter & Gilovich, 2010) and by regretting how money was spent (Rosenzweig & Gilovich, 2012).

In the present research, we propose another key difference between spending money on experiences compared with material possessions that suggests an alternative mechanism by which individuals derive happiness from spending discretionary money: Experiences may be more likely to be shared with others, whereas possessions may be more prone to solitary use. If so, variations in the sociality of experiences should moderate the extent to which they provide happiness relative to material possessions. Extensive research shows that social relations are influential sources of happiness (for reviews, see Berscheid & Reis, 1998; Leary & Baumeister, 2000; Lyubomirsky, King, & Diener, 2005; Myers, 2000; Reis & Gable, 2003). By the same reasoning, material possessions obtained in the service of social interaction may make people happier than material possessions intended for nonsocial use.

Our goal in the present research was to determine whether sociality accounts for the documented hedonic advantages of experiences over possessions and whether sociality is a better predictor of happiness from spending money than the distinction between experiences or possessions per se. To pursue this goal, our work was driven by three research questions: (a) Are experiences more likely to be social than solitary, and are material possessions more likely to be solitary than social? (b) Do solitary experiences make people as happy as material possessions do? and (c) Is the social–solitary dimension more important for happiness than the material–experiential dimension? The remainder of the introduction introduces hypotheses derived from these questions and reviews evidence relevant to each hypothesis.

How Might the Sociality of Experiences and Possessions Relate to Happiness?

Prior research on experiential buying has not directly examined the role of sociality. However, the proposition that experiences tend to be social and that this is a key mechanism by which they influence happiness has been suggested by several researchers, including Van Boven and Gilovich (2003; see also Carter & Gilovich, 2010; Howell & Hill, 2009; Nicolao et al., 2009; Rosenzweig & Gilovich, 2012). Furthermore, qualitative analyses of “extraordinary experiences” (Abrahams, 1986) have consistently identified group camaraderie as a key ingredient behind the personal meaning that consumers derive from their experiences (Turner & Turner, 1978). For example, Arnould and Price’s (1993) seminal analysis of extended river-rafting trips highlighted participants’ newly developed relationships with guides and other participants as the foundation for the self-renewal experienced over the course of the trip. The same process of sharing a common bond “in the moment” has been identified as a central component of other extraordinary experiences, such as skydiving (Celsi, Rose, & Leigh, 1993), participation in modern mountain men reenactments (Belk & Costa, 1998), and attendance at cultural festivals such as Burning Man (Kozinets, 2002).

Other evidence suggests that solitary experiences are less valuable than experiences involving others. First, perceiving that one’s subjective experience is shared with others (or *I-sharing*; Pinel, Long, Landau, Alexander, & Pyszczynski, 2006) fosters connectedness more than does feeling isolated in one’s experience. Sec-

ond, emotions tend to be amplified in interdependent compared with independent contexts (Jaremka, Gabriel, & Carvallo, 2011; Luminet, Bouts, Delie, Manstead, & Rimé, 2000). In a classic study, for example, bowlers were more likely to visibly express happiness after bowling a high-scoring strike or spare when facing an audience of peers than when facing the pins (Kraut & Johnston, 1979). When people reconstruct a typical, mundane day, experiences that involve intimate relationships are recounted as more positive than other personal events of that day and are usually rated as the most positive of all daily experiences (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004; White & Dolan, 2009). Finally, research on the affective costs of social isolation is abundant (see Cacioppo & Patrick, 2008, for a review), and the relationship between social integration and well-being is so strong as to be called “one of the most robust findings in the literature on well-being” (Lyubomirsky et al., 2005, p. 823).

However, we propose that material possessions tend to be more solitary in nature, in the sense that most possessions are bought with the intention of being used alone rather than shared with others. To be sure, possessing material goods may have implications for social life. For example, the value of material possessions is often evaluated in comparison to other people’s possessions (Frank, 1999). Self-presentation goals often motivate the purchase of material possessions, such as a desire to signal uniqueness (Berger & Heath, 2007), status (Griskevicius et al., 2007), and identity (Belk, 1988) or to bolster self-esteem (Escalas & Bettman, 2003). However, the act of sharing possessions is not necessary for satisfying these self-presentation goals and may even be counterproductive, insofar as nongenerosity is a core aspect of materialism (Belk, 1985). Consistent with this logic, individuals with relatively chronic materialistic tendencies are viewed as relatively more selfish and self-centered than individuals with chronic experiential tendencies (Van Boven, Campbell, & Gilovich, 2010). Thus, material possessions in and of themselves often lack the central quality of experiences that make them amenable to improving happiness: the involvement of others.

Thus, we hypothesize that social experiences will make people more happy than solitary experiences. Furthermore, although no research to date has directly compared solitary experiences to material possessions, because of the evidence indicating that sharing experiences is critical to their effect on happiness, we propose, by extension, that experiences not involving others are likely to be seen as no more valuable than, and perhaps less valuable than, material possessions.

Does the Social–Solitary Dimension Predict Happiness Better Than Materialism–Experientialism Does?

Following the above, we hypothesize that the social–solitary dimension may predict happiness better than materialism–experientialism does. This prediction is consistent with an abundance of evidence on the importance of social relationships and interactions for well-being. First, shared activities are more likely than material possessions to satisfy the need to belong (Howell & Hill, 2009), which is a necessary ingredient for promoting well-being (Baumeister & Leary, 1995; Ryan & Deci, 2000). Second, all else being equal, social interaction is associated with positive affect (Emmons & Diener, 1986; Watson, Clark, McIntyre, & Hamaker, 1992). For example, people report more positive affect

on days when positive social events occur (e.g., lunch with friends) than on days when they do not (Clark & Watson, 1988; Gable, Reis, & Elliot, 2000; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), and these increases operate independently of increases associated with positive, personal achievements on those days (e.g., Nezlek, 2002; Nezlek, Feist, Wilson, & Plesko, 2001; Reis et al., 2000). Also, although talking about one's experiences can increase positive affect above and beyond the affect derived from the experience itself (Reis et al., 2010), happiness tends to be intensified by sharing that experience with others in the moment (Jaremka et al., 2011). Thus, the advantages of spending money on experiences relative to material possessions may be attributable to the social nature of experiences and their effects on well-being rather than to the experiences per se.

By extension, we propose that the value of material possessions can be enhanced by involving others. Some material possessions are designed to facilitate social interactions (e.g., board games, sports equipment, and stereo systems for family rooms). Furthermore, people may strategically act on this knowledge by spending money for this purpose (e.g., to reaffiliate following rejection; Mead, Baumeister, Stillman, Rawn, & Vohs, 2011). Finally, utilitarian, need-based goods are more apt to be shared or jointly owned than are hedonic, discretionary goods (Belk, 2010; Dhar & Wertenbroch, 2000). If social interactions are as critical to happiness as research suggests, then obtaining discretionary material possessions with the goal of enhancing social interaction may make people happier than obtaining discretionary material possessions primarily for personal use. From this reasoning, we propose that proper understanding of the happiness benefits of life experiences versus material possessions requires consideration of whether one's purchases are meant to be shared or solitary. Crossing these two dimensions results in four possibilities: shared experiences, shared possessions, solitary experiences, and solitary possessions.

More generally, our proposition that the social outcomes of discretionary spending are key to happiness derives from evidence that the social context of life experiences influences the personal meaning of those circumstances and therefore their impact on affective states (Reis, 2008; Reis, Collins, & Berscheid, 2000; Rimé, 2007, 2009). Numerous psychological processes originally postulated to be transsituational have been shown to vary when the relationship context is manipulated (Reis, 2008). The same may be said about research on obtaining happiness from experiences and possessions. Although experiences may naturally occur with others, as proposed above, and may be a salient feature of those experiences from the perspective of the participant, this feature of experiences has not been examined explicitly in previous research. In other words, the "relationship context is sometimes implicit in a phenomenon or theory but ill-specified" (Reis, 2008, p. 321) by research designs. The same stimulus—a night out on the town—seems unlikely to make an individual as happy if considered outside of the context of whom the night on the town is spent with. Consequently, when recalling past experiences, spontaneous reports of happiness may be affected by their socially shared aspects, whereas thinking about material possessions may have no such social aspects.

If this reasoning is correct, happiness differences between experiences and possessions would be attributable to the fact that experiences tend to involve others, whereas possessions are not

usually bought to be shared with others. However, possessions that were obtained to promote social interactions may make people happier than material possessions obtained for individual use and may provide happiness comparable to that obtained from acquiring life experiences. Similarly, experiential purchases that are solitary may be no more gratifying than possessions. The research reported in this article was designed to distinguish effects of the type of purchase—experiences and material possessions—from whether the purchase was shared with others or consumed alone.

If these hypotheses are correct, then our work will elucidate one mechanism underlying Van Boven and Gilovich's (2003) findings. Our approach follows the research strategy, proposed by Spencer, Zanna, and Fong (2005), of identifying mechanisms underlying psychological processes by manipulating mediators rather than by measuring them. Furthermore, our work may clarify findings from past research, which may have overlooked the possibility that participants assumed a social context for their experiences but not for their material possessions. This research also contributes to the emerging literature on the affective consequences of spending money by documenting the impact of social connections on judgments of happiness.

Study 1

Given a choice between spending money to do things alone or with others, are social experiences associated with greater happiness than solitary experiences? And are solitary experiences associated with less happiness than material possessions? We designed Study 1 to address these questions by comparing the perceived desirability of social and solitary experiences relative to material purchases. We hypothesized, as discussed earlier, that social experiences would be valued more highly than material purchases. We further hypothesized that solitary experiences would be valued less than material purchases.

In Study 1, we adapted the procedure of Van Boven and Gilovich (2003, Study 4) to directly test these two hypotheses in a carefully controlled way. Van Boven and Gilovich presented participants with pairs of hypothetical purchases—one material possession and one experience—and asked them to indicate which they would choose and which would make them happier. Study 1 built on this procedure by randomly assigning participants to choose between pairs of purchases: material objects versus social experiences, material objects versus solitary experiences, and solitary versus social experiences. Additionally, to compare our results directly with those of Van Boven and Gilovich (2003), a final group of participants chose between material objects versus experiences in which the involvement of others was not explicitly stated (hereinafter termed *unspecified experiences*). In the unspecified comparison condition, we expected to replicate Van Boven and Gilovich's (2003) finding that experiences were preferred to material possessions.

In Study 1, we also included sex as a factor in its design. We did so because of the possibility that men and women may differ in their preferences for material possessions relative to experiences. All other things being equal, women tend to view social participation as more of an intimacy-building process than men do (e.g., Reis, Lin, Bennett, & Nezlek, 1993), and women tend to score higher on measures of relational self-construal than men do (e.g., Cross & Madson, 1997). Women may therefore enjoy experiences

more because of their social nature. As another example, men tend to view consumption as a means of signaling reproductive fitness, at least for short-term mating (Sundie et al., 2011), which suggests that they might prefer possessions to experiences. Because of these possibilities, we felt it prudent to include sex as a factor in our studies, although we did not have specific a priori hypotheses about how sex would moderate spending preferences.

Finally, Study 1 used a manipulation asking participants to imagine making their decisions tomorrow, 1 year from now, or 1 year ago. This manipulation was included to replicate the results of Van Boven and Gilovich (2003), who found that experiences promoted happiness better than material objects when imagined in the distant past or future (both are abstract construals) than when imagined tomorrow (a concrete construal). In other words, experiences are more desirable because their features are more prone to abstract construal (Trope & Liberman, 2010). If social experiences are more desirable than material possessions and solitary experiences, then this effect should be pronounced in temporally distant conditions. Likewise, if solitary experiences are generally less desirable than material possessions, this effect may be attenuated in a temporally distant context.

Method

Participants and procedure. Three hundred twenty-seven participants (181 women; 55%) were approached on campus and given a survey in which they were shown 12 pairs of purchases. Participants were randomly assigned to view one of four combinations of purchases: material objects versus social experiences, material objects versus solitary experiences, solitary versus social experiences, and material objects versus unspecified experiences. Participants were randomly assigned to imagine facing their choices 1 year ago, tomorrow, or 1 year from now. They were asked to indicate which of the two purchases they would choose and which would make them happier.

The combinations of purchases were counterbalanced, created with a blocked design. Experiences and possessions were first divided into four blocks of three items (Blocks A, B, C, and D, once each for experiences and possessions). Each experience block then appeared once in tandem with each block of possessions; that is, one set of stimuli used the block pairings AA, BB, CC, DD. The second set used AB, BC, CD, DA; the third, AC, BD, CA, and DB; and the fourth, AD, BA, CB, and DC. Participants were randomly assigned to view one of the four sets of stimuli created with this method. Thus, the study took on a 4 (comparison set: material–social, material–solitary, material–unspecified, solitary–social) \times 3 (temporal construal: distant past, near future, distant future) \times 4 (order) \times 2 (outcome: choice, happiness) design, with repeated measures on the outcome factor.

Results and Brief Discussion

Because the types of purchases being compared varied within sets, we created a new variable representing whether participants picked the hypothesized purchase within each comparison set. For example, in the condition contrasting material possessions with social experiences, participants received a 0 for each material possession choice and a 1 for each social experience choice. In the material–solitary comparison set, participants received a 0 for each

choice of a solitary experience and a 1 for each choice of a material object. In the solitary–social comparison set, 0 represented the choice of a solitary experience and 1 represented the choice of a social experience. In the material–unspecified experience comparison set, participants received 0 for each material possession choice and 1 for each unspecified experience choice. We then summed these choices across the 12 decisions that each participant made, resulting in a score that could vary between 0 and 12. We repeated this procedure for ratings of happiness.

Because each comparison set asked a different question, we analyzed each set separately. To evaluate the key hypothesis in each set, we took the above scores and subtracted 6 (which represents equal preference for the two categories). These values were then subjected to a Sex \times Temporal Construal \times Order analysis of variance. In this model, the test of the intercept is the test of our hypothesis: It asks whether preferences deviated significantly from the equal preference score of 6. The two outcome questions were analyzed separately. For clarity, Figure 1 reports these same values as the percentage of participants choosing each option.

When comparing material possessions with unspecified experiences, participants' choices did not differ significantly, $F(1, 50) < 1$, but participants were significantly more likely to feel that experiences would make them happier, $F(1, 49) = 9.33, p = .004, \eta^2 = .16$. No other effects were significant.

When comparing material possessions with social experiences, participants were significantly more likely to choose social experiences, $F(1, 56) = 36.18, p < .001, \eta^2 = .39$, and to indicate that social experiences would make them happier, $F(1, 53) = 99.98, p < .001, \eta^2 = .65$. For both questions, there were significant main effects of temporal construal—for choices, $F(2, 56) = 4.74, p = .02, \eta^2 = .15$; for happiness, $F(2, 53) = 4.56, p = .02, \eta^2 = .15$ —and interactions of temporal construal by sex—for choices, $F(2, 56) = 6.18, p = .004, \eta^2 = .18$; for happiness, $F(2, 53) = 3.48, p = .04, \eta^2 = .12$. For choices, simple effects tests showed that men were significantly less likely to choose the social option when thinking about a year ago than when thinking about the present, $t(50) = 3.18, p = .004$, or the future, $t(50) = 2.17, p = .04$. For men, there were no significant differences between the latter two conditions, $t(50) = 0.78, ns$. For women, temporal construal conditions did not differ, $F(2, 74) = 1.13, ns$. The same pattern of differences was observed for happiness ratings. There were no sex main effects for either dependent variable.

When comparing material possessions with solitary experiences, participants were significantly more likely to choose material possessions, $F(1, 54) = 19.68, p < .001, \eta^2 = .27$, and to feel that material possessions would make them happier, $F(1, 55) = 26.47, p < .001, \eta^2 = .33$. No other effects were significant.

Finally, when comparing solitary experiences to social experiences, participants were more likely to choose social experiences, $F(1, 59) = 290.05, p < .001, \eta^2 = .83$, and to indicate that social experiences would make them happier, $F(1, 56) = 370.17, p < .001, \eta^2 = .87$. Again, no other effects were statistically significant.

These results demonstrate that the perceived value of experiences relative to material possessions depends on whether experiences are to be shared with others. In the condition that replicated Van Boven and Gilovich's (2003) study—possessions versus unspecified experiences—one of the two questions replicated their

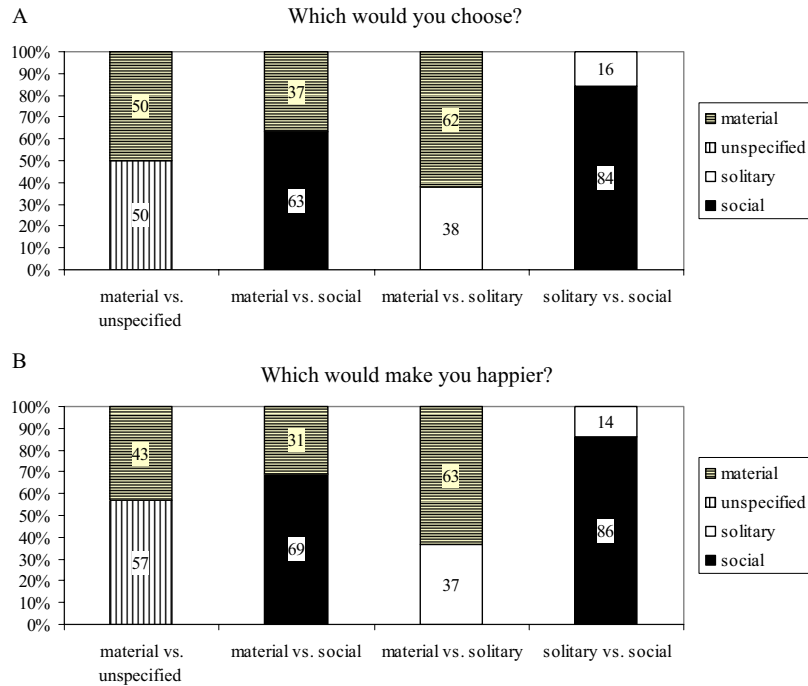


Figure 1. The effect of comparing different combinations of purchases on preferences for those purchases (Study 1). The top figure represents preferences when participants were asked to indicate which of the pair of purchases they would choose. The bottom figure represents preferences when participants were asked to indicate which would make them happiest. The numbers embedded within bars represent percentages of choices for each category of purchase, corresponding to each of the shaded regions within bars.

results. Pairwise comparisons in the other three sets clearly indicated that social experiences were preferred to material possessions and that material possessions were preferred to solitary experiences. With one exception, in which men showed an effect of temporal construal and women did not, the same pattern of preferences applied across sexes and regardless of whether acquisition decisions were framed as occurring a year ago, tomorrow, or a year from now. This indicates that the social aspect of experiences is fundamental to their effects on happiness and suggests that participants in past research likely may have been thinking about social experiences when assessing how these experiences would or would not make them happy.

Study 2

Two drawbacks of the data described to this point are that we have (a) relied on a convenience sample of college students to (b) indicate their preferences for hypothetical purchases. Van Boven and Gilovich (2003, Study 2) showed that preferences for experiential over material purchases generalized to the wider population in a large, nationally representative sample. We sought to replicate these findings with a more general sample for several reasons. First, unlike the population at large, many college students are financially dependent on other persons (American Council on Education, 2007) and may have less discretionary money than financially independent adults do. Second, unlike college students, respondents in the general population are more likely to be interdependent with other family members, which may affect the way

they spend money and the nature of life experiences. For example, pilot subjects from a sample of college students described the experience of eating breakfast as an activity performed alone 80% of the time. In traditional families, however, breakfast may be a more social experience. Finally, there is evidence that making choices about who to spend time with changes with age (Carstensen & Mikels, 2005), which may influence decisions about spending money on social or solitary experiences versus material possessions. Thus, it is important to determine whether social experiences make people happier than solitary experiences do in a sample with a more diverse age range.

In Study 2, we asked a demographically heterogeneous sample of online participants to think about actual purchases made during their lifetime, rather than to choose between hypothetical purchases. This design sidesteps idiosyncratic preferences for or against the particular items used as stimuli in the prior studies. A disadvantage of asking participants to recall actual purchases is that we have less control over their cost and how much time has elapsed between buying and reporting happiness, both of which may confound happiness ratings with judgments of consumer satisfaction (e.g., Frederick, Novemsky, Wang, Dhar, & Nowlis, 2009), ease of retrieval (e.g., Winkielman, Schwarz, Fazendeiro, & Reber, 2003), and adaptation effects (Nicolao et al., 2009). Our prior study controlled these variables experimentally; Study 2 measured these variables and used them as covariates.

We also examined potential demographic and individual difference moderators in Study 2. Van Boven and Gilovich (2003)

showed that the preference for experiences over material possessions was relatively general in that these preferences were consistent across a range of demographic variables. In Study 2, we examined most of the same demographic variables with the goal of demonstrating that preferences for social experiences over material possessions and solitary experiences is also relatively general. However, because individuals vary in the extent to which they value privacy (Berscheid, 1977), we also considered whether the perceived value of solitary experiences could be enhanced by nonanxious appreciation of solitude. As measured by the Preferences for Solitude Scale (Burger, 1995; Cramer & Lake, 1998), preferences for solitude are relatively independent of socially anxious motives for seclusion (Leary, Herbst, & McCrary, 2003). They are associated with a developmental history of healthy adjustment to time spent alone (Larson, 1990) and with a tendency to use time alone for self-discovery, emotional calming, and problem solving (Long, Seburn, Averill, & More, 2003). In this study, we investigated whether preferences for social experiences over solitary experiences and material possessions may be moderated by a healthy desire for solitude.

Method

Participants and procedure. Six hundred eight-four participants were recruited online from several sources. Four hundred forty-seven (65.3%) of these were recruited through Craigslist from ads posted in the Volunteers section of 44 metropolitan areas across the United States. We also posted links to the study on six major websites that host web surveys (e.g., <http://psych.hanover.edu>) and on the Social Psychology Network, which advertised the study over Twitter.

We excluded participants who failed to report on at least two thirds of the purchases (104 cases, 15.2%), who listed the same purchase for all three categories (11 cases, 1.6%), or who took more than 2 hr to complete the survey (six cases, 0.08%; the average participant took 19.8 min to complete the study). The final sample ($N = 563$) was primarily female (78.5%) and Caucasian (87.0%), and most had at least a high school diploma or equivalent (99.2%), were employed full or part time (55.6%), and were either married (27.4%) or not dating (36.6%). The mean age was 32.7 years ($SD = 12.8$ years, range = 18–77 years).

Participants were informed that “We are interested in how you spend your discretionary money. Discretionary money refers to money spent with the intent of furthering your happiness. This excludes money spent on needs and everyday necessities (e.g., toiletries, utility bills etc.).”

Participants first thought about a recent material purchase, defined, as Van Boven and Gilovich (2003) did, as “a tangible object that you obtain and keep in your possession” (p. 1194). Next, they thought about a recent social experiential purchase, defined as “spending money with the primary intention of acquiring or participating in a life experience THAT INVOLVED OTHER PEOPLE” (capitalization appeared in the survey). A life experience was defined as “an event or series of events that you encounter or live through,” following Van Boven and Gilovich (2003). Finally, participants thought about a recent solitary experiential purchase, defined as a life experience “THAT YOU EXPERIENCED BY YOURSELF.” Order of presentation was the same for

all participants. For all three purchases, participants were instructed that the purchase could be minor or major.

Participants listed the purchase and indicated how much it had cost and how long ago the purchase had occurred. Participants responded to two happiness items, modeled after Van Boven and Gilovich (2003). The first asked, “When thinking about your purchase, how happy does it make you right now?” The second asked, “When you made your purchase, how happy did it make you then?” Participants responded to both items on scales ranging from 1 (*neutral*) to 5 (*exceptionally happy*). Finally, participants were asked to rank the purchases. These data fell on a scale with anchors 1 (*least happy*), 2 (*in between*), and 3 (*most happy*). Another question allowed them to indicate if they were unsure about which purchase made them most or least happy; however, ties were not allowed. Participants then indicated their age, sex, marital status, highest educational degree, household income, employment status, residential environment (urban, suburban, and rural), and geographic location (Northeast, South, Midwest, and West). Finally, participants completed the Enjoyment of Solitude subscale.

Measures.

Enjoyment of solitude. We modified the four-item Enjoyment of Solitude subscale from Burger’s (1995) Preferences for Solitude Scale. In its original form, participants chose between two items, one reflecting time spent alone and one reflecting time spent with others. A sample item compares “I try to structure my day so that I always have some time to myself” with “I try to structure my day so that I always am doing something with someone.” We used Burger’s (1995) paired items but asked participants to indicate their relative identification with each one, using a scale anchored at -3 (*The first statement sounds a lot more like me than the second*), 0 (*Both statements sound equally like me*), and 3 (*The second statement sounds a lot more like me than the first*). This modification increases scale variance, a limitation of the original scale (J. M. Burger, personal communication, December 11, 2008). The revised four-item scale demonstrated reasonable reliability ($\alpha = .64$).

Results and Brief Discussion

Purchase characteristics. Participants described a range of purchases. Material purchases ranged in cost from \$1 to \$520,000 ($Mdn = \$79.50$, $M = \$4,503.21$). Social purchases ranged from \$1 to \$1,200,000 ($Mdn = \$65$, $M = \$5,495.98$). Solitary purchases ranged from \$0 (going for a walk) to \$100,000 ($Mdn = \45, $M = \$1,630.90$). On average, solitary purchases cost marginally less than material purchases, $F(1, 491) = 3.57$, $p = .06$, and nonsignificantly less than social purchases, $F(1, 491) = 2.16$, ns . Material and social purchases did not differ significantly in cost, $F(1, 491) < 1$.

Material items had been bought 30 min to 3 years prior to responding ($Mdn = 14$ days, $M = 47.49$ days). Social experiences had been bought 6 hr to 5 years prior to responding ($Mdn = 21$ days, $M = 73.27$ days). Solitary experiences had been bought 6 hr to 8 years prior to responding ($Mdn = 21$ days, $M = 122.34$ days). Material purchases were significantly more recent than social experiences, $F(1, 465) = 7.80$, $p = .005$, and solitary experiences, $F(1, 465) = 22.47$, $p < .001$. Social purchases were significantly more recent than solitary experiences, $F(1, 465) = 8.73$, $p = .003$.

Given these differences, we used time and cost as covariates. Because of significant skew and heterogeneity of variances, time and cost were log-transformed to normalize the distribution of scores (Box & Cox, 1964). (This procedure was repeated in later studies.) Because the primary hypotheses were tested in a within-subjects design with within-person varying covariates, the covariates were centered (Delaney & Maxwell, 1981).

Happiness ratings. To assess the effects of purchase type on happiness, we submitted happiness ratings for the two items to a three-condition (purchase type: solitary experience, material object, social experience) mixed linear model in which the two covariates, cost and time since purchase, varied between conditions (McCulloch, 2003). Looking first at current happiness ratings, we found that the main effect of purchase type was statistically significant, $F(2, 962.4) = 4.84, p = .008$. Follow-up least significant difference tests indicated that social experiences ($M = 3.48$) made people significantly happier than did material purchases ($M = 3.25$), $t(1079.7) = 2.97, p = .003$, and solitary experiences ($M = 3.30$), $t(984.0) = 2.21, p = .03$. Material purchases did not significantly differ from solitary purchases, $t(986.8) = 0.59, ns$. As for recollections about happiness at the time of purchase, the main effect of purchase type was also statistically significant, $F(2, 970.5) = 6.00, p = .005$. Follow-up least significance difference tests indicated that social experiences ($M = 3.77$) made people significantly happier than did material purchases ($M = 3.55$), $t(1082.0) = 3.01, p = .003$, and solitary experiences ($M = 3.55$), $t(986.3) = 2.87, p = .004$. Material purchases did not significantly differ from solitary purchases, $t(996.0) = 0.01, ns$.¹

Happiness rankings. On average, social experiential purchases were ranked higher ($M = 2.32$) than material purchases ($M = 1.83$) and solitary experiences ($M = 1.84$). We analyzed these data with Friedman's test, the nonparametric equivalent of repeated-measures analysis of variance for ranked data (Siegel, 1956). The three types of purchases were ranked significantly differently, $\chi^2(2) = 65.74, p < .001$.² On the basis of the recommendation of Corder and Foreman (2009), we computed contrasts using the Wilcoxon signed ranks test. Rankings of social purchases significantly differed from both other purchases, $Zs > 6.73, p < .001$, whereas rankings of material and solitary purchases did not differ significantly, $Z = 0.30, ns$.

Demographic moderators. Because the two happiness ratings produced similar results, for simplicity, we summed the two ratings to a single measure of self-reported happiness. We then examined whether happiness ratings for social over material and solitary purchases were consistent across the various demographic indicators.³ Continuous demographic predictors were categorized into roughly equal-sized groups for convenience. Age, sex, marital status, education, income, employment status, residential environment, and geographic location did not significantly interact with purchase type.

Enjoyment of solitude. We examined moderation by enjoyment of solitude in two ways. First, we tested for moderation with ratings data by entering the main effect of enjoyment of solitude and its interaction with condition in a mixed-model analysis of variance. We represented condition with two orthogonal planned contrasts, one contrasting social experiences with the other two conditions, the other contrasting solitary experiences with material purchases. Second, we tested for moderation with ranked data by

individually correlating, using Spearman's ρ , enjoyment of solitude with rankings for each of the three purchases.

Results indicated no significant interaction of enjoyment of solitude with happiness ratings. However, we did find an interaction, in the expected direction, with ranked data. Enjoyment of solitude correlated negatively with rankings of social experiences, $\rho(434) = -.13, p = .01$; positively correlated with rankings of solitary experiences, $\rho(432) = .13, p = .01$; and did not correlate with rankings of material purchases, $\rho(444) = -.02, ns$. Thus, people who value privacy tended to rank social experiences lower and solitary experiences higher than people who value privacy less, whereas rankings of material objects were unrelated to this disposition.

In summary, Study 2 replicated and extended findings from our earlier studies. Both happiness ratings and rankings for actual purchases followed the same general pattern as ratings of hypothetical purchases: People preferred social experiences over material possessions and solitary experiences. In this study, however, happiness ratings for material possessions and solitary experiences did not significantly differ from each other.

In terms of moderation, the effects were consistent across all potential demographic moderators. However, there was mixed evidence for moderation by personality. In the ratings data, enjoyment of solitude did not reliably moderate judgments of the value of the three purchases. However, this variable did moderate relative rankings, such that social experiences were ranked lower and solitary experiences were ranked higher, relative to each other, whereas rankings for material possessions were unaffected. This result is consistent with existing literature (Burger, 1995) and with our predictions.

Study 3

Study 3 was primarily designed to address two key limitations of the prior studies. First, although Studies 1 and 2 showed that preferences between material possessions and life experiences in prior research may be confounded with a social-solitary factor, the designs of our studies did not allow us to determine whether the material possessions participants were describing were used primarily alone or with others. Crossing the material-experiential factor with a social-solitary manipulation in a 2×2 design disambiguates effects of the type of purchase and its social context on happiness. Second, to minimize the possibility that ratings would reflect reactivity toward or beliefs about the relative merit of possessions and experiences and of social and solitary pursuits,

¹ Analyses excluding covariates from the model were nearly identical. For simplicity, we report here results using a composite measure of happiness, averaging across the two dependent variables ($r = .64$). Social experiences were rated significantly higher than material possessions, $t(1115.0) = 2.70, p = .007$, and solitary experiences, $t(1014.2) = 2.91, p = .004$. Material possessions did not significantly differ from solitary experiences, $t(1015.3) = 0.37, ns$.

² Fifty participants (8.8%) indicated that they were unsure of how the purchases ranked and were excluded from analyses of rank. Twenty-seven of these 50 participants had partially completed rankings before indicating "unsure." Results are identical when these individuals were included.

³ We do not report significance tests of moderation by demographics for ranked data because rank tests are less powerful than parametric tests. However, across all demographics, social experiences were ranked higher than both material purchases and solitary experiences.

participants viewed only one of the four between-subjects conditions. Thus, the design of Study 3 allowed for clearer determination of the relative contribution of each factor toward happiness.

An additional purpose of Study 3 was to examine two additional potential moderators of these effects, materialism and extraversion. Materialism describes a disposition in which life satisfaction derives largely from acquiring and displaying worldly possessions (Belk, 1985; Richins & Dawson, 1992). Given its central role in theories of happiness and given that materialism has been shown empirically to moderate preferences for material possessions over experiences (Nicolao et al., 2009), we explored whether materialism might moderate preferences for experiences or possessions with social or solitary functions. Finally, extraversion describes tendencies to seek out and derive happiness from emotional stimulation from others (Pavot, Diener, & Fujita, 1990). Because higher levels of extraversion are associated with experiential buying tendencies in general (Howell, Pchelin, & Iyer, 2012) and with the consumption of social–leisure activities specifically (Mehmetoglu, 2012), Study 3 explored whether extraversion might exacerbate preferences for social experiences and possessions over solitary purchases.

Method

Participants and procedure. A representative sample of 825 participants was recruited online through Knowledge Networks, Inc., in conjunction with the Time-Sharing Experiments in the Social Sciences (TESS) program funded by the National Science Foundation. Of these, 101 participants (12.2%) were excluded for reporting that they did not have any discretionary purchases or for failing to list a purchase. The probability of being dropped from analyses varied by condition, $\chi^2(3) = 11.24, p = .01$. In the solitary–experiential condition, 18.5% of cases did not describe a purchase; in the other three conditions, these values were 7.8% (social–experiential), 12.5% (social–material), and 11.1% (solitary–material). The probability of being dropped did not vary as a function of sex, marital status, urban–rural status, or age but did vary by education level, $\chi^2(3) = 24.69, p < .001$, and ethnicity, $\chi^2(1) = 7.99, p = .005$. Nonresponses were more common among less educated than better educated respondents (24.7% vs. 5.1%, respectively) and among Hispanic than non-Hispanic respondents (22.4% vs. 11.2%, respectively).

The final sample consisted of 342 women (47.2%) and 382 men (52.8%). It was composed primarily of non-Hispanic Whites (76.2%) but included non-Hispanic Blacks (8.0%), multiethnic non-Hispanic respondents (7.6%), and Hispanic respondents (8.1%). The majority of the sample was either single and never married (15.5%) or married (59.7%). The mean age was 49.73 years ($SD = 17.11$ years, range = 18–100 years). Most of the sample had either graduated high school only (26.7%), completed some college (20.2%), or had attained a bachelor degree (20.0%). Respondents were distributed throughout the United States (18.5% Northeast, 23.5% Midwest, 37.2% South, 20.9% West).

Participants were told that we were interested in how they spend their discretionary money, which we defined in somewhat more detail than in Study 2:

Discretionary money refers to money that is spent on anything that is NOT essential to basic activity (that is, essentials refer to things like tuition and textbooks, groceries, transportation, rent, gas for a car,

health care, etc.). We'd like you to answer the questions that follow for money that you spent on something discretionary.

Participants were then randomly assigned to one of four conditions. Instructions for the solitary–experiential condition read as follows:

Please think of the last time you spent at least \$10 (but no more than \$10,000) of your discretionary money in order **to do something by yourself**. The primary focus of this expense should have been on an activity—doing something by yourself—and not on buying something that could be kept. Maybe you bought a ticket to see a movie by yourself, maybe you paid to enter an art museum, maybe you paid for a massage . . . any of these would be legitimate examples of spending money to do something by yourself.

Instructions for the social–experiential condition read as follows:

Please think of the last time you spent at least \$10 (but no more than \$10,000) of your discretionary money in order **to do something with at least one other person**. The primary focus of this expense should have been on an activity—doing something with at least one other person—and not on buying something that could be kept. Maybe you bought tickets to see a movie with some people, maybe you paid to visit an art museum with friends, maybe you and some other people went to a spa together . . . any of these would be legitimate examples of spending money to do something with others.

Instructions for the social–material condition read as follows:

Please think of the last time you spent at least \$10 (but no more than \$10,000) of your discretionary money in order **to acquire a material possession to use with at least one other person**. Maybe you bought a sound system to use with others, maybe you acquired new clothes or jewelry for dressing up to go out with others, or maybe you bought a game to play with others . . . any of these would be legitimate examples of spending money to acquire material goods to use with others.

For the solitary–material condition, instructions read as follows:

Please think of the last time you spent at least \$10 (but no more than \$10,000) of your discretionary money in order **to acquire a material possession to use by yourself**. Maybe you bought a sound system that only you will use, maybe you acquired new clothes or jewelry for dressing up to go out alone, maybe you bought a game to play by yourself . . . any of these would be legitimate examples of spending money to acquire material goods to use alone.

Participants then responded to the same happiness items as in Study 2. We also included an additional dependent variable, adapted from Van Boven and Gilovich (2003), which read, “To what extent would you say this activity [possession] is money well-spent?” Participants responded on a 5-point scale, anchored by 1 (*not well-spent*) and 5 (*extremely well-spent*). Next, participants indicated the amount of money they spent and how long ago the purchase had been made. Finally, participants completed measures of extraversion, materialism, and demographic variables: sex, age, education level, household size, household income, geographic region, and employment status.

Measures.

Extraversion. We used the two-item Extraversion subscale of the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003). Participants indicated the degree to which two pairs of characteristics ($r = .48$) described them—“Extraverted, enthusi-

astic” and “Reserved, quiet” (reversed)—on 5-point Likert-type scales (1 = *disagree strongly* to 5 = *agree strongly*).

Materialism. We used the four-item Acquisition as the Pursuit of Happiness subscale (e.g., “I wouldn’t be any happier if I owned nicer things”; reversed, $\alpha = .76$) from Richins and Dawson’s (1992) measure of materialism. Participants indicated their degree of agreement or disagreement on a 5-point Likert-type scale (1 = *disagree strongly* to 5 = *agree strongly*).

Results and Brief Discussion

Purchase characteristics. As in Study 2, participants described a variety of purchases. Social experiences cost between \$1 and \$9,000 (*Mdn* = \$40, *M* = \$261.50). Solitary experiences cost between \$2 and \$20,000 (*Mdn* = \$30, *M* = \$403.95). Social possessions cost between \$0 and \$10,000 (*Mdn* = \$65, *M* = \$388.03). Solitary possessions cost between \$1 and \$32,000 (*Mdn* = \$50, *M* = \$396.85). There were no significant main effects or interactions on cost (*F*s < 1).

Social experiences had been bought between 1 month and 6.42 years prior to responding (*Mdn* = 1 month, *M* = 2.86 months). Solitary experiences had been bought between 1 month and 11.67 years prior to responding (*Mdn* = 1 month, *M* = 5.14 months). Social possessions had been bought between 1 month and 11.67 years prior to responding (*Mdn* = 1 month, *M* = 6.82 months). Solitary possessions had been bought between 1 month and 10 years prior to responding (*Mdn* = 1 month, *M* = 5.39 months). There was a significant main effect of the material–experiential dimension on elapsed time, $F(1, 715) = 5.42, p = .02, \eta^2 = .01$, that was qualified by a significant Social–Solitary \times Material–Experiential interaction, $F(1, 715) = 4.04, p = .045, \eta^2 = .01$. Solitary experiences had been bought about equally as long ago (*M* = 5.14 months) as solitary possessions (*M* = 5.39 months), $F(1, 715) < 1, ns$, but social experiences had been purchased significantly more recently (*M* = 2.86 months) than social possessions (*M* = 6.82 months), $F(1, 715) = 5.19, p = .023, \eta^2 = .01$.

Happiness ratings by condition. To assess the effects of purchase type on happiness, we submitted ratings to a 2 (social, solitary) \times 2 (material, experiential) \times 3 (outcome: happiness now, happiness when purchased, money well spent) multivariate analysis of covariance (MANCOVA), controlling for cost and elapsed time as covariates. Combining dependent variables, the multivariate main effect of the social–solitary factor was significant, $F(3, 689) = 2.64, p = .048, \eta^2 = .01$. The multivariate main effect of the material–experiential factor was also significant, $F(3, 689) = 10.84, p < .001, \eta^2 = .05$. The multivariate interaction approached significance, $F(3, 689) = 2.28, p = .078, \eta^2 = .01$. Adjusted marginal means are presented in Table 1.⁴

Follow-up univariate tests revealed significant effects of the social–solitary factor for happiness now, $F(1, 691) = 4.90, p = .027, \eta^2 = .01$, and for happiness then, $F(1, 691) = 7.68, p = .006, \eta^2 = .01$, but not for money well spent, $F(1, 691) = 1.55, ns$. For both of the significant effects, social purchases were rated more positively than solitary purchases were. The material–experiential factor exhibited no effect for happiness now, $F < 1$, but significant effects for happiness then, $F(1, 691) = 5.32, p = .021, \eta^2 = .01$, and for money well spent, $F(1, 691) = 8.58, p = .004, \eta^2 = .01$. For happiness then, experiential purchases were rated more positively than material purchases were, but for money well spent, the

Table 1
Adjusted Happiness Ratings, by Condition, Controlling for Cost and Time Since Purchase (Study 3)

	Social	Solitary	Marginal
Happiness now			
Material	3.53 _a (.08)	3.45 _a (.08)	3.49 (.06)
Experiential	3.63 _a (.08)	3.35 _b (.09)	3.49 (.06)
Marginal	3.58 (.06)	3.40 (.06)	
Happiness then			
Material	3.81 _a (.07)	3.59 _b (.07)	3.70 (.05)
Experiential	3.93 _a (.07)	3.79 _a (.08)	3.86 (.05)
Marginal	3.87 (.05)	3.69 (.05)	
Money well spent			
Material	3.81 _a (.08)	3.70 _a (.07)	3.75 (.06)
Experiential	3.59 _a (.08)	3.46 _a (.09)	3.52 (.06)
Marginal	3.70 (.06)	3.58 (.06)	

Note. Means with different subscripts within rows differ significantly at $p < .05$. Standard errors are reported within parentheses.

pattern of means was reversed. There were no significant between-groups tests for the interaction term, *F*s < 1.46, *ns*.

Tests of moderation by individual differences. We examined whether preferences for social over solitary purchases across material and experiential dimensions were consistent across several demographic indicators listed above. For simplicity, we manually averaged happiness ratings across the three variables ($\alpha = .86$) and, for each demographic category, predicted these ratings from a model that included that variable as a third factor in an analysis of covariance (in addition to the social–solitary and material–experiential factors and to the time and cost covariates). Of these analyses, only one significant two-way interaction emerged, for sex and material–experiential condition, $F(1, 707) = 6.89, p = .009, \eta^2 = .01$. Simple effects tests showed that that women rated experiences (*M* = 3.76) higher than material possessions (*M* = 3.58), $F(1, 707) = 6.73, p = .01$, but for men, the pattern was reversed: material possessions (*M* = 3.70) were rated higher than experiences (*M* = 3.53), $F(1, 707) = 7.28, p = .007$.

We also examined materialism and extraversion as possible moderators. This was accomplished by conducting regression analyses on the three-variable composite with contrast codes for the experimental conditions and, in separate analyses, centered continuous variables for materialism and extraversion (Cohen, Cohen, Aiken, & West, 2003). Extraversion did not interact significantly with any of the experimental variables. Materialism did interact with social–solitary condition, $F(1, 702) = 4.84, p = .028, \eta^2 = .002$. In the social condition, there was a marginally significant negative association between materialism and happiness, $B =$

⁴ Analyses excluding covariates from the model were similar. For simplicity, we describe these results using a composite measure of happiness ($\alpha = .86$), calculated manually rather than from within the MANCOVA program. There was a main effect of sociality approached significance, $F(1, 721) = 3.57, p = .059$, such that social purchases were rated significantly higher (*M* = 3.70) than were solitary purchases (*M* = 3.58). Neither the main effect of the material–experiential manipulation nor the interaction of material–experiential with the social–solitary dimension were statistically significant, *F*s < 1.

-.09, $SE = .05$, $F(1, 702) = 3.26$, $p = .07$. Thus, higher levels of materialism were associated with less happiness for participants recalling shared purchases. In the solitary condition, this simple slope was not significant, $B = .06$, $SE = .05$, $F(1, 702) = 1.46$, ns .

In summary, Study 3 demonstrated that social purchases were rated as producing higher levels of happiness than solitary purchases regardless of whether experiences or material possessions were being described. This pattern was robust across most demographic categories and individual difference measures, except for sex and materialism. Thus, our central findings were confirmed when we split material possessions into social and solitary categories. Study 3 also demonstrates that reactivity to being shown all of the categories of our research does not account for the results of the prior studies.

Study 4

Study 4 sought to examine one further potential alternative explanation for our findings. Whether using between-subjects or within-subjects designs, Studies 2 and 3 prompted participants for specific purchases. This prompt may have elicited stereotypical beliefs about what makes people happy instead of ratings that reflect actual or recollected happiness. It seems plausible that people have strong beliefs about the relative merit of material possessions and experiences and of social and solitary activities. For example, U.S. culture has negative stereotypes both about materialism (Kasser, 2002; Van Boven et al., 2010) and about being alone versus being with others (DePaulo & Morris, 2005, 2006). Because our prior studies asked participants to describe purchases in one or another category involving these labels, it is possible that these stereotypes were made salient and thereby affected their ratings.

Study 4 was designed to rule out this possibility. Participants were asked to describe and rate the last time they spent discretionary money without specifying anything about the kind of purchase that ought to be described. After those ratings were complete, participants were asked to classify their purchase on the material-experiential and social-solitary dimensions. In this way, participants were not aware of our distinctions between social and solitary conditions or material and experiential purchases at the time of their happiness ratings. As a supplemental check, independent coders also classified participants' descriptions on the same two dimensions.

This design also allowed us to more clearly assess the degree to which the social-solitary and material-experiential dimensions are naturally correlated in actual purchases. By asking participants to recall the last time they spent discretionary money, without leading them to recall one kind of discretionary purchase over another, we can test whether material possessions are, in fact, recalled as solitary more often than as social and whether experiences are, in fact, recalled as social more often than as solitary.

Method

Participants and procedure. Three hundred eight participants were recruited online through Amazon's Mechanical Turk (<http://www.mturk.com>; Buhrmester, Kwang, & Gosling, 2011). The sample comprised 190 women (61.7%) and 103 men (33.4%); 15 individuals (4.9%) did not indicate their sex. The sample was

primarily Caucasian (76.0%), with the remainder listing a range of ethnicities. The majority of the sample was either single (27.5%) or married (40.2%). Participation was restricted to residents of the United States. The mean age was 34.8 years ($SD = 12.6$ years, range = 13–70 years).

Participants were told that we were interested in how they spend their discretionary money (defined identically as in Study 3). Participants then read instructions that were carefully constructed so as to not direct attention toward any specific type of purchase but to ensure sufficient variability in responses:

Often, people spend their discretionary money with the specific purpose of increasing or furthering their happiness. There are a variety of ways to accomplish this (e.g., a new TV, a ski trip, a new shirt, or a trip to the spa). Common to these examples, though, is the goal of spending money to increase happiness.

Take a minute to think back to the last time you spent between \$10 and \$10,000 of discretionary money to further your happiness. On what did you spend your money? Why? Describe this purchase or activity in some detail. Please be sure to describe what you did, who else (if anyone) was involved, and how it affected your happiness.

Participants then completed the same dependent measures and covariates as in Study 3. Next, participants categorized their purchases along social-solitary and material-experiential dimensions. Finally, participants completed individual difference measures and indicated their age, sex, and location.

After all data had been collected, three coders, unaware of the hypotheses, read each purchase description and rated it along social-solitary and material-experiential dimensions. Social-solitary ratings were made on a dichotomous scale; descriptions were assigned 0 if the purchase was *explicitly or likely solitary* and 1 if the purchase was *explicitly or likely social*. Material-experiential ratings were made on a 4-point scale; descriptions were assigned 1 if the purchase was *definitely material*, 2 if the purchase was *mostly material but slightly experiential*, 3 if the purchase was *mostly experiential but slightly material*, and 4 if the purchase was *definitely experiential*. For both scales, discrepancies were resolved before ratings between the three coders were averaged. Average codes that fell below 0.5 on the social-solitary dimension were labeled *solitary*; average codes above 0.5 were labeled *social*. Average codes that fell below 2.5 on the material-experiential dimension were labeled *material*; average codes above 2.5 were labeled *experiential*. Coders demonstrated excellent reliability ($\alpha = .94$ for both dimensions).

Measures.

Enjoyment of solitude. We used the same four items, scales, and anchors as in Study 2. We also added three items from the original scale that had not been included in Study 2 (e.g., "I often have a strong desire to get away by myself" compares with "I rarely have a strong desire to get away by myself"). The internal consistency of the total seven-item scale was acceptable ($\alpha = .76$).

Extraversion. We assessed extraversion with a seven-item subscale of the Big Five Inventory (John & Srivastava, 1999; $\alpha = .86$). Participants indicated the degree to which a series of characteristics described them, stemming from "I see myself as someone who . . ." on a 5-point Likert-type scale (1 = *disagree strongly* to 5 = *agree strongly*). Sample characteristics include "has an

assertive personality” and “is sometimes shy, inhibited” (reversed).

Materialism. Individual differences in valuing materialistic pursuits were measured with Richins and Dawson’s (1992) full 18-item scale ($\alpha = .84$). Participants indicated their degree of agreement or disagreement on a 5-point Likert-type scale (1 = *disagree strongly* to 5 = *agree strongly*). Sample items include “I admire people who own expensive homes, cars, and clothes” and “I like a lot of luxury in my life.”

Results and Brief Discussion

Purchase characteristics. We used participant-coded categories to examine how the covariates varied between conditions. Social experiences cost between \$3 and \$6,500 ($Mdn = \$100$, $M = \$890.94$). Solitary experiences cost between \$2 and \$10,000 ($Mdn = \$92$, $M = \$511.21$). Social possessions cost between \$10 and \$5,000 ($Mdn = \$105$, $M = \$371.69$). Solitary possessions cost between \$0 and \$18,000 ($Mdn = \$100$, $M = \$590.07$). There were no significant effects on cost, $F_s < 2.0$, *ns*.

Social experiences had been bought between 1 day and 7.41 years prior to responding ($Mdn = 45$ days, $M = 6.63$ months). Solitary experiences had been bought between 1 day and 2.49 years prior to responding ($Mdn = 32$ days, $M = 4.55$ months). Social possessions had been bought between 1 day and 2.25 years prior to responding ($Mdn = 33$ days, $M = 3.08$ months). Solitary possessions had been bought between 1 day and 8.33 years prior to responding ($Mdn = 51.50$ days, $M = 6.84$ months). There were no significant effects on time, $F_s < 3.55$, $p_s \geq .061$.

Covariation of the social–solitary and material–experiential dimensions. Next, we assessed how frequently the purchases, as recalled and coded by the participants, were categorized into each of the four categories defined by crossing the social–solitary and material–experiential dimensions. A goodness-of-fit test revealed that the purchases were unevenly distributed into the four categories, $\chi^2(1) = 65.30$, $p < .001$. Purchases coded as material possessions were more likely to be solitary ($n = 138$, or 79.3%) than social ($n = 36$, or 20.7%). However, purchases coded as experiences were more frequently social ($n = 85$, or 66.9%) than solitary ($n = 42$, or 33.1%). Binomial tests indicated that both of these distributions differed significantly from chance, $p_s < .001$.

The same pattern held when observer-coded dimensions were submitted to a goodness-of-fit test, $\chi^2(1) = 65.62$, $p < .001$. Purchases coded as material possessions were more often solitary ($n = 132$, or 73.7%) than social ($n = 47$, or 26.3%). Purchases coded as experiences were more often social ($n = 94$, or 72.9%) than solitary ($n = 35$, or 27.1%). Binomial tests indicated that both of these distributions differed significantly from chance, $p_s < .001$.

Happiness ratings by self-coded conditions. To assess the effects of purchase type on happiness we submitted ratings to a 2 (social, solitary) \times 2 (material, experiential) \times 3 (outcome: happiness now, happiness when purchased, money well spent) MANCOVA, controlling for cost and elapsed time as covariates. Combining dependent variables, the multivariate main effect of the social–solitary factor approached significance, $F(3, 295) = 2.12$, $p = .097$, $\eta^2 = .02$. Neither the multivariate main effect of the material–experiential factor nor the multivariate interaction was significant, $F_s < 1$.⁵ Adjusted marginal means are presented in the left half of Table 2.

Univariate between-groups tests revealed significant differences of the social–solitary factor for happiness now, $F(1, 297) = 3.79$, $p = .053$, $\eta^2 = .01$, and for money well spent, $F(1, 297) = 4.94$, $p = .027$, $\eta^2 = .05$, but not for happiness then, $F < 1.0$, *ns*. For both happiness now and money well spent, social purchases were rated more positively than solitary purchases. There were no significant between-groups main effects of the material–experiential factor or interactions between the factors on any of the individual dependent variables, $F_s \leq 1.41$, *ns*.

Happiness ratings by observer-coded conditions. When happiness ratings were compared across observer-coded conditions, the multivariate main effect of the social–solitary factor was statistically significant, $F(3, 293) = 3.34$, $p = .020$, $\eta^2 = .03$. As before, the multivariate main effect of the material–experiential factor was not statistically significant ($F < 1.0$) and the multivariate interaction only approached significance, $F(3, 293) = 2.18$, $p = .09$, $\eta^2 = .02$. Adjusted marginal means are presented in the right half of Table 2.

Univariate between-groups tests revealed the same pattern of effects as in the self-coded condition analyses. There were significant main effects of the social–solitary factor for happiness now, $F(1, 295) = 9.57$, $p = .002$, $\eta^2 = .03$, and for money well spent, $F(1, 295) = 5.67$, $p = .018$, $\eta^2 = .02$, but not for happiness then, $F(1, 295) = 1.90$, *ns*. In both significant instances, as shown on the right side of Table 2, social purchases were rated more positively than solitary purchases. There were no significant between-groups main effects of the material–experiential factor ($F_s < 1.65$). There was one statistically significant interaction of the material–experiential and social–solitary factors, for happiness now, $F(1, 295) = 5.20$, $p = .023$, $\eta^2 = .02$ (for happiness then and money well spent, $F_s < 1.0$). For material possessions, happiness now ratings were significantly higher for social ($M = 4.07$) than for solitary ($M = 3.27$) purchases, $F(1, 295) = 4.48$, $p = .035$. For experiences, social purchases ($M = 3.52$) were again higher than for solitary purchases ($M = 3.38$), but this difference did not approach significance, $F < 1.0$.

Tests of moderation. We examined whether preferences for social over solitary purchases across material and experiential dimensions were consistent across sex, age, and geographic region. For these analyses, we manually averaged happiness ratings across the three variables ($\alpha = .71$) and, for each demographic category, predicted these ratings from a model that included that variable as a third factor in the analysis of covariance (in addition to the social–solitary and material–experiential factors and to the time and cost covariates). There were no significant two-way or three-way interactions for any demographic variable with the social–solitary and material–experiential dimensions.

To examine the individual difference moderators, we conducted regression analyses on the three-variable composite with contrast

⁵ Analyses excluding covariates from the model were similar. For simplicity, we report here results using a manually calculated composite measure of happiness ($\alpha = .71$). In this analysis, there was a significant main effect of sociality, $F(1, 297) = 8.70$, $p < .001$, such that social purchases were rated significantly higher ($M = 3.83$) than solitary purchases ($M = 3.48$), collapsing across material and experiential dimensions. Neither the main effect of the material–experiential manipulation nor the interaction of material–experiential with the social–solitary dimension was statistically significant, $F_s < 1.18$, *ns*.

Table 2

Adjusted Happiness Ratings, by Condition, Controlling for Cost and Time Since Purchase (Study 4)

	Self-coded condition			Observer-coded condition		
	Social	Solitary	Marginal	Social	Solitary	Marginal
	Happiness now					
Material	3.72 _a (.16)	3.36 _b (.10)	3.54 (.09)	4.07 _a (.18)	3.27 _b (.09)	3.67 (.10)
Experiential	3.49 _a (.11)	3.29 _a (.19)	3.39 (.11)	3.52 _a (.12)	3.38 _a (.16)	3.45 (.10)
Marginal	3.60 (.10)	3.32 (.11)		3.79 (.11)	3.32 (.09)	
	Happiness then					
Material	3.74 _a (.15)	3.58 _a (.09)	3.66 (.09)	3.86 _a (.17)	3.55 _a (.09)	3.70 (.10)
Experiential	3.59 _a (.11)	3.73 _a (.18)	3.66 (.10)	3.66 _a (.11)	3.57 _a (.16)	3.62 (.10)
Marginal	3.66 (.09)	3.66 (.10)		3.76 (.10)	3.56 (.09)	
	Money well-spent					
Material	4.07 _a (.17)	3.61 _b (.10)	3.84 (.10)	4.08 _a (.20)	3.62 _b (.10)	3.85 (.11)
Experiential	3.78 _a (.12)	3.56 _a (.20)	3.67 (.12)	3.87 _a (.13)	3.54 _a (.18)	3.70 (.11)
Marginal	3.93 (.11)	3.58 (.11)		3.97 (.12)	3.58 (.10)	

Note. Means with different subscripts within rows differ significantly at $p < .05$. Standard errors are reported within parentheses.

codes for the experimental conditions and centered continuous variables for enjoyment of solitude, materialism, and extraversion in separate analyses (Cohen et al., 2003). There were no significant two-way or three-way interactions of any of these variables with the social–solitary and material–experiential factors, $F_s < 2.57$, *ns*.

In summary, the results of Study 4 were consistent with the results of Studies 2 and 3. Without any explicit prompting from experimenters, participants who recalled social purchases—whether experiential or material—recalled those purchases as providing more happiness than participants who recalled solitary purchases. This finding was true for both participant-coded and observer-coded categories of purchases. Furthermore, these preferences were robust across all measured moderators.

An additional novel insight from Study 4 concerns the natural covariation of the social–solitary and experiential–material dimensions, which we were able to tabulate from participants' spontaneous recollections. In other words, social–solitary differences appear to be naturally linked to the recollection of past spending: Participants who recall experiences tend to be recalling social experiences, and participants who recall material possessions tend to be recalling solitary purchases.

General Discussion

Across four studies, a clear pattern of preferences between different types of purchases emerged. Spending money to acquire experiences that are shared with others was valued over spending money on experiences enacted alone or on material possessions. Material possessions, however, were valued more than or equally to solitary experiences. When we distinguished social and solitary material possessions, social purchases were favored over solitary purchases. Together, these results extend and clarify earlier reports from Van Boven and Gilovich (2003) and other researchers, in which they showed that spending money on life experiences makes people happier than spending money on material possessions. Experiences and material possessions differ systematically in various ways, all of which may contribute to their effects on happiness

(Carter & Gilovich, 2010, 2012; Howell & Hill, 2009; Nicolao et al., 2009; Rosenzweig & Gilovich, 2012). Our results demonstrated that one such difference, sociality, can fully account for the hedonic advantages of spending money on experiences relative to material possessions.

Our data do not explain why social experiences are preferred over material possessions or why solitary experiences are undervalued relative to material possessions. There are several reasons why this might be the case. As previous researchers have shown (e.g., Nicolao et al., 2009; Van Boven, 2005; Van Boven & Gilovich, 2003) and as we demonstrated here, experiences are perceived to have greater affective value. Experiences may have an inherently more social nature than material possessions do (Howell & Hill, 2009; Nicolao et al., 2009). Our results confirm this speculation empirically: In Study 4, in spontaneous recollections, experiences tended to be social, whereas material possessions tended to be solitary. Our findings further demonstrate that this inherent sociality is a central mechanism by which happiness is obtained from experiences relative to material possessions.

Another reason behind the value of social experiences may stem from the fact that because experiences tend to have more of a narrative structure than material possessions do (Van Boven & Gilovich, 2003), they are more likely to be fun to talk about with others. Thus, shared experiences contribute to reliving enjoyable social interactions after the fact. This mechanism is consistent with research on capitalization, which shows that talking to others about positive life events can increase happiness above and beyond the affective benefits of the event itself (Gable, Gonzaga, & Strachman, 2006; Gable & Reis, 2010; Reis et al., 2010). A third reason is that social experiences are unlikely to be exchangeable across consumption settings, compared to material possessions or to solitary experiences (Rosenzweig & Gilovich, 2012). In other words, one trip to Lake Tahoe, enacted with particular others—and therefore different blends of personalities, preferences, and interaction styles—is not identical to a second trip to Lake Tahoe with different others. Solitary material possessions and experiences, on

the other hand, are likely to be more exchangeable, although this conclusion awaits future research.

The demonstrated impact of the social context of experiences is consistent with the literature on the general impact of social relationships on happiness beyond discretionary spending (for reviews, see Berscheid & Reis, 1998; Leary & Baumeister, 2000; Lyubomirsky et al., 2005; Myers, 2000; Reis & Gable, 2003). If experiences create opportunities for social interaction, there is reason to believe that these interactions may be responsible for their effects on happiness (Gable et al., 2000; Jaremka et al., 2011; Reis et al., 2000). Of course, conflict or other aversive qualities would not advance happiness (Miller, 1997), but social experiences more frequently tend to be positive rather than negative (Reis & Gable, 2003; Watson et al., 1992). Within the realm of positive experiences, different qualities may have differential impacts on happiness. Whether one is able to I-share during the experience (Pinel et al., 2006); engage in novel, arousing, or passionate activities (Aron, Norman, Aron, McKenna, & Heyman, 2000; Philippe, Vallerand, Houliort, Lavigne, & Donahue, 2010); build intimacy and closeness (Reis, Clark, & Holmes, 2004); or simply enjoy pleasant social interactions, all imbue social experiences with happiness-producing potential. Positive affect, in turn, helps build social resources, contributing to a mutually reinforcing association between sociality and positive affect (Fredrickson, 2001).

Our results are broadly consistent with recent data showing that spending money on others makes people happier than spending money on the self (Dunn, Aknin, & Norton, 2008). Although evidence suggests that merely reminding people of money distances the self from others (Vohs, Mead, & Goode, 2006), spending money on or with others may undo this self-reliant mindset, providing one means of promoting sustainable happiness (Lyubomirsky et al., 2005; Sheldon & Lyubomirsky, 2006). Social interaction may be a conceptual commodity that people are motivated to purchase to increase happiness, above and beyond the motivation to acquire life experiences per se (Ariely & Norton, 2009). Spending money to share experiences or possessions may translate directly into psychological investments in relationships with others (Belk & Coon, 1993; Dahl, Sengupta, & Vohs, 2009), perhaps increasing both parties' commitment to the relationship (Goodfriend & Agnew, 2008).

More generally, our results support the value of documenting the relationship context in which money is spent as part of understanding how people draw happiness from their activities (Reis et al., 2000). Ascribing value to experiences and possessions requires considering who is involved and one's relationship with them, not merely what is being done. Before deciding to go hiking in the Rockies, it is likely that people will consider who is accompanying them and how that company might influence their experience. Social considerations of this sort are likely intrinsic to decisions about spending discretionary money on experiences, as shown in our participants' spontaneous recollections (Study 4). Moreover, Study 1 showed that participants reported less happiness with experiences enacted alone than with material possessions. Because our studies used experimental manipulation to establish mediation (Spencer et al., 2005), we conclude that sociality is a reliable mechanism underlying the differential effect of spending money on experiences versus possessions as a cause of happiness.

Further Interpretation of Specific Results

The value of material possessions relative to solitary experiences depended in part on whether the purchases were hypothetical or actual: Participants in Study 1, who evaluated hypothetical options, preferred material possessions over solitary experiences, whereas participants in Studies 2–4, who reported on actual spending, did not differ significantly in ratings of the two types of purchases. Thus, material goods and solitary experiences may have equivalent value when holding constant the different prices and the amount of elapsed time since their purchase. It is worth noting that the value of material possessions depended in large part on whether the purchases were intended for social or solitary consumption. In Studies 3–4, in which material possessions were classified as social or solitary, possessions bought with the intention of being shared were valued more highly than solitary possessions.

In multiple tests of moderation, preferences for social experiences over material possessions and solitary experiences appeared to be relatively general. Across our five studies, we showed that these preferences were rarely moderated by demographic niche, as represented by sex, age, employment status, education level, residential environment, geographic region, marital status, household size, and income. The only exception occurred in Study 3, in which men preferred material possessions over experiences, whereas women preferred experiences over material possessions. Although this specific finding is generally consistent with research showing that men pursuing short-term mating goals prefer to spend money on objects that conspicuously signal reproductive fitness (Griskevicius et al., 2007; Sundie et al., 2011), a goal that material possessions are more apt to fulfill than experiences given their proneness to social comparison processes (Howell & Hill, 2009), we did not find this effect in our other studies, suggesting that there is a relatively normative preference for social over solitary purchases.

We also examined several individual difference moderators of our hypothesized pattern of preferences. Of the three examined, materialism and enjoyment of solitude revealed significant moderation once, and extraversion showed no reliable effect. Across studies, then, our findings suggest a general lack of moderation of the basic pattern of results, consistent with Van Boven and Gilovich's (2003) results. This suggests that when considering differences between experiences and material possessions, the social component of experiences represents a widely valued preference.

Our findings differed from Van Boven and Gilovich (2003) in finding only one instance in which temporal construal moderated purchase preferences. Two differences between our work and theirs may account for this divergence. First, we manipulated temporal construal only in measures that were distributed to unpaid passersby on campus and not to participants in a laboratory study. It is possible that our participants were less motivated to attend to subtle instruction manipulations. Second, only one condition in Study 1 was directly comparable to Van Boven and Gilovich's (2003) Study 4, which first demonstrated a construal effect. Other conditions in our study contrasted material possessions with experiences that were overtly social or solitary, thus making salient a feature of the experiences that may have outweighed temporal distance and different levels of abstraction. Theories of social cognition have highlighted the degree to which

social cues often consume attentional resources over other non-social features of the environment (Cosmides & Tooby, 1992; Fiske, 1993). Likewise, considering an experience devoid of social context (in the case of solitary experiences) may divert attention from other cues.

Limitations and Future Directions

This research had several limitations. First, our data were retrospective or hypothetical. All participants in our research thought about and reported happiness on purchases made in the past, as is typical of this area of research. A noteworthy exception is a study by Nicolao et al. (2009, Study 3) in which participants spent “lab dollars” on either an experience or on a material possession and indicated their happiness at various time intervals afterward. They found that happiness derived from spending money on experiences dissipated more slowly than happiness derived from spending money on material possessions. (Notably, all of their experiences were enacted alone.) Although research has begun to explicate how people anticipate, experience, and remember different kinds of purchases (Pchelin & Howell, 2012), it will be important for future researchers to consider how the social context of spending affects these social-cognitive processes and, in turn, how these processes affect happiness. One hypothesis is that people may adapt more slowly to social experiences and acquisitions than to solitary experiences and acquisitions, particularly if the social context affords high-intensity emotional experiences (Ariely & Loewenstein, 2000; Fredrickson & Kahneman, 1993). A related hypothesis is that because experiences tend to be more bounded in time, they may leave a clearer, more enduring impression on memory, whereas material possessions may lose hedonic value over time, because repeated usage dilutes their enjoyment.⁶

Second, our studies were not designed to identify which relationships (i.e., family, children, friends, strangers) are most likely to be beneficial when involved in experiences or acquisitions. Not all relationships are the same, of course, and it seems unlikely that sharing an experience with a disliked other would increase happiness. Future research should examine how particular relationships alter the relative value of experiences and material possessions. For example, how much money would people be willing to spend to visit New York City with their spouse and children, their high school friends, or a casual acquaintance, and would this difference influence the happiness derived from the experience?

Third, certain experiences may not ever be reasonably enacted alone—for example, playing many sports. In today’s continuously connected world, even solitary experiences can be communicated to others in or near the moment, thus blurring lines between experiences shared physically or vicariously (e.g., through Twitter; Lowther, 2011). A similar argument can be made for possessions, some of which cannot reasonably be used with other persons—for example, a briefcase to hold one’s papers or a pair of custom orthotics. These examples suggest potential ambiguities that should be clarified in future research. In this regard, Van Boven and Gilovich (2003) posited that material possessions and life experiences vary along a single dimension (see also Carter & Gilovich, 2010; Nicolao et al., 2009). Our work suggests that this dimension may be crossed by (and potentially confounded with) a second, social–solitary dimension. Alternatively, perhaps social experiences are organized prototypically, with explicitly social

experiences being the central construct, indirect social experiences representing less prototypical versions, and solitary experiences representing the least prototypical version.

Finally, it bears mention that experiences and possessions vary along other dimensions beyond the social–solitary one that we examined. For example, possessions and experiences may vary in the extent to which they fulfill aesthetic, utilitarian, or status functions. Furthermore, purchases may vary in goal relevance. Some purchases (possessions or experiences) may be necessary for living in the modern world (e.g., a washing machine, a file cabinet, or going to lunch with clients) without direct or immediate effects on happiness. Some purchases may also be less relevant to producing pleasure than to avoiding pain (e.g., a heater; Vohs & Baumeister, 2011). These distinctions may also influence preferences and should be examined in the future.

Conclusion

The literature on money and happiness converges on the finding that discretionary money is better spent on doing than having. Our research suggests that it may be less the doing that creates happiness than it is sharing the doing. Accounting for the relationship context in which experiences occur is an important step in understanding how people spend money in the pursuit of happiness. -

⁶ We thank the editor for suggesting this hypothesis.

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