

The “Time vs. Money Effect”:
Shifting Product Attitudes through Personal Connection

CASSIE MOGILNER

PhD Candidate, Marketing

Stanford University, Graduate School of Business

mogilner_cassie@gsb.stanford.edu

Abstract

The results of four experiments reveal that product attitudes can be systematically shifted by what is as subtle and as pervasive as drawing consumers' attention to time versus money. Because time increases focus on product experience, whereas money increases focus on product possession, activating time (vs. money) tends to augment consumers' personal connection with a product, thereby boosting product attitudes. However, in cases where merely owning the product reflects the self, the reverse effect can occur such that activating money (vs. time) leads to more favorable attitudes. This "time versus money effect" proves robust across implicit and explicit methods of construct activation. Implications for research on the psychology of time and money are discussed.

References to time and money are pervasive in the consumer landscape. Consider, for example, the marketing campaigns of two brands of beer: Miller's "It's Miller time" commercials have appealed to consumers by guiding attention to time, whereas Stella Artois's "Perfection has its price" campaign has appealed through focusing attention on money. Even Citibank, an institution based on monetary transactions, brings focal attention to how one chooses to spend time (not money) in their "Live Richly" campaign (e.g., "There is no preset spending limit when it comes to time with your family"). In fact, a content analysis of ads in four magazines targeting a wide range of consumers (*Money*, *New Yorker*, *Cosmopolitan*, and *Rolling Stone*) revealed that, out of the 300 advertisements, nearly half of the ads (48%) integrated the concepts of time and/or money into their messages.

Despite the preponderance of marketers' decisions to use these constructs in their communications, little is known about the downstream effects of directing consumers' attention to time or money. Does the mere mention of time versus money change the way consumers evaluate products? And if so, why?

To address these questions, we conducted a series of laboratory and field-based experiments. The results converge to show that increasing the relative salience of time versus money systematically shifts product attitudes. This "time versus money effect" appears to be driven by a differential focus on experiencing versus possessing the product. In cases where one's experience using the product fosters personal connection with the product, activating time (vs. money) leads to more favorable attitudes. However, there are also conditions where one's mere possession of the product reflects the self (e.g., ownership of a high status good). In such conditions, activating money (vs. time) can instead lead to

more favorable product attitudes. Together, the results demonstrate the driving role of personal connection in consumers' product attitudes (experiments 1, 3, and 4) and illuminate the determinant roles of product type and consumer type in the relevant effect of activating time versus money (experiments 3 and 4). Importantly, the robustness of the time versus money effect occurs across both explicit and implicit methods of activating time and money (experiments 2 and 4).

THE PSYCHOLOGY OF TIME AND MONEY

Time and money are complex constructs that have enjoyed considerable attention across a wide variety of disciplines. As a small sampling, researchers have examined the impact of temporal distance on how potential future outcomes are construed and valued (e.g., LeBoeuf 2006; Loewenstein 1987; Malkoc and Zauberman 2006; Mogilner, Aaker, and Pennington 2008; Trope and Liberman 2000; Zauberman and Lynch 2005), as well as the emotional and behavioral effects of temporal orientation (Bergadaa 1990; Van Boven and Ashworth 2007) and lifetime (Carstensen, Isaacowitz, and Charles 1999; Ferraro, Shiv, and Bettman 2005). The research on money is similarly dense, primarily focusing on money as a resource, exploring the subjective experience of gaining versus losing it (Kahneman and Tversky 1979), decisions of how to spend and allocate it (Dunn, Aknin, and Norton 2008; Heath and Soll 1996; Thaler 1985), and the effects of its accumulation on happiness, health, and mortality (Adler and Snibbe 2003; Diener and Seligman 2004).

Further, a growing stream of research has integrated the constructs of time and money, arguing that they are both fundamentally important resources, but are marked by

psychologically distinct characteristics that impact each one's allocation (e.g., Saini and Monga 2008; Soman 2001; Zauberan and Lynch 2005). For example, because time is less fungible than money (i.e., one can't make up for lost time), losing time tends to be more painful than losing money (Leclerc, Schmitt, and Dubé 1995). Further, because the measurement of time is more ambiguous than of money, people feel less accountable for how they spend their time; consequently, they prefer to spend time rather than money on such outcomes as high risk-high return lotteries and hedonic goods (Okada 2005; Okada and Hoch 2004).

Personally Connecting through Time vs. Money

Characteristics such as fungibility and ambiguity are but one type of important distinction defining time and money; another might be the extent to which each is personally meaningful. It may, therefore, be that merely mentioning time versus money has broader consequences—fostering differential meaning for consumers thinking about their products. Our basic premise is that activating the construct of time (vs. money) tends to encourage feelings of personal connection with products, particularly when the product is experiential—where *using* the product defines the consumer experience.

Three lines of research give rise to such a premise. First, in the context of charitable giving, individuals report how they spend their time to be more reflective of one's personal identity than how they spend their money (Reed et al. 2007). Consequently, individuals prefer donating their time rather than their money to charity, particularly when they are motivated to be perceived as moral (Reed et al. 2007). Second and relatedly, recent

research shows that asking questions about potential temporal versus financial donations to a charity differentially fosters beliefs of personal happiness, which drives actual donation behavior (Liu and Aaker 2008). For instance, when individuals are asked to donate some time to a charity, they are likely to consider their personal happiness which would ensue from making that donation. If instead, they are first asked to donate some money to a charity, they are less likely to consider their personal happiness. Consequently, individuals give significantly more money to the charity when first solicited for time (vs. money).

A third and broader research stream also highlights the link between time and the self, particularly as it applies to the representation of time as an (ultimately scarce) resource: As time becomes more constrained, personally meaningful goals become more important (Carstensen, Isaacowitz, and Charles 1999). For example, when time is seen as limited, people are more persuaded by messages that are emotionally meaningful (Williams and Drolet 2005) and that reflect personally important goals (Liu and Aaker 2007). Thus, not only is wasted time unable to be regained (Leclerc et al. 1995), but the ways individuals choose to spend their time and the experiences they accumulate over the course of such temporal expenditures quite literally constitute each person's life and who they perceive themselves to be (Van Boven and Gilovich 2003).

Therefore, we propose that activating the construct of time while consumers evaluate a product will lead them to focus on their experiences using the product, which generally will heighten their feelings of personal connection to that product (i.e., the extent to which the product is "me"). So, much like accumulating shared experiences from spending time with other people increases feelings of interpersonal connection (Aron et al.

2000), spending time with products should increase consumers' feelings of personal connection to those products.

In contrast, spending money is less representative of oneself (Reed et al. 2007), suggesting that the activation of money during product assessment should not afford the same feelings of personal connection. Instead, money is a colder unit of exchange that when made salient may, in fact, lead consumers to feel personally disconnected from their products. Indeed, the primary value of money comes from its instrumentality in acquiring products and services (Lea and Webley 2006), with greater amounts of money promising access to higher quality goods (Kirmani and Wright 1989). In this light, the value of spending money is less about the personal experience it offers; instead, it is about the value of goods it affords—which anyone can acquire as long as they are willing to pay that price.

We, therefore, propose that activating the construct of money (during product assessment) will lead individuals to focus on the value of possessing the product, which typically does not grant heightened feelings of personal connection. This prediction conceptually dovetails with recent research showing that activating the concept of money leads individuals to interpersonally disconnect from others. Indeed, when money is primed (e.g., a stack of monopoly money is in one's visual periphery or participants arrange words to form phrases that are related to money: "a high-paying salary" vs. "it is cold outside"), individuals do not want to depend on others, nor do they want others to depend on them (Vohs et al. 2006). So, much like activating money decreases people's feelings of personal connection to others, activating money may also lead consumers to feel personally disconnected from their products.

There may be particular instances, however, where the mere possession of the product feels more “me” than the actual usage of the product (Escalas and Bettman 2005; Kleine, Kleine, and Allen 1995). Prestige possessions, for example, are a product category where spending a large amount of money on the product reflects one’s identity (Bearden and Etzel 1982; Richins 1994). Likewise, for materialistic consumers, who largely identify themselves by the prestige of their possessions, the products they own communicate their self worth (Richins and Dawson 1992). Individuals have, indeed, been shown to lay out considerable sums of money to own brands which they feel reflect an aspect of their self (Aaker 1999), and it has been argued that in some instances possessions can even serve as extensions of oneself (Belk 1988). One consumer notes, “[buying prestige brands have become] a part of my life. They reflect my lifestyle. I spend 30% to 40% of my salary on these goods” (Ray 2008). In the case of prestige possessions (e.g., designer jeans, expensive jewelry, high status cars), consumers extract value from merely owning the product, while the time spent actually using the product wanes in importance (Van Boven and Gilovich 2003). Indeed, in many cases, very little time is spent with the product once purchased (Silverstein, Fiske, and Butman 2005). Therefore, we predict that for prestige possessions and for materialistic consumers, priming money (vs. time) will instead increase feelings of personal connection by increasing focus on product possession.

Personal Connection and Product Attitudes

Irrespective of whether feelings of personal connection stem from experiences gained using the product or from the mere possession of the product, we hypothesize that

increasing one's feelings that the product is "me" will lead to more favorable product attitudes. Indeed, decades of research in psychology have given credence to the assumption that individuals are motivated to (and do) view themselves favorably (Allport 1961; James 1950; Taylor and Brown 1988). Consequently, people have positive automatic associations with respect to themselves—which can influence their feelings about almost anything that is associated with them (Greenwald and Banaji 1995; Hetts, Sakuma, and Pelham 1999; Paulhus and Levitt 1987). For example, people like the letters that appear in their own name more than those that are not (Nuttin 1985), and they are nicer to strangers who share their birthday than they are to other strangers (Miller, Downs, and Prentice 1998).

It, therefore, seems highly likely that people will also like products more that are more closely connected to the self than products that are not. Evidence from consumer research offers support for this prediction, showing that consumers report more favorable attitudes towards products that reflect their personal identities (Beggan 1992; Reed 2004; Schultz, Kleine, and Kernan 1989). Thus, we posit a causal link whereby heightening feelings of personal connection to a product will foster more favorable attitudes towards that product. However, departing from prior research, we argue that when these feelings of personal connection stem from experiences gained using the product, activating time (vs. money) should lead to more favorable product attitudes. In contrast, when feelings of personal connection stem more from mere product possession, activating money (vs. time) should lead to more favorable product attitudes (see figure 1).

Note that in this proposed process, activating time (vs. money) does not just make the overall consumption experience more salient. Rather, activating time leads consumers to focus on a particular aspect of consuming the product (i.e., product experience). In

contrast, activating money is proposed to lead consumers to focus more on one's experienced value from having the product (i.e., product possession). In other words, the overall valence of consuming the product should not translate into product attitudes, as an availability-valence account would predict (Kisielius and Sternthal 1986). Rather, the valence of each of these aspects of the overall consumption experience should have greater influence when its respective construct is activated. Specifically, when time is activated, the valence of one's experience using the product should matter. In contrast, when money is activated, the valence of one's experience having the product should matter. More formally, we predict:

- H1:** Activating time versus money shifts product attitudes by increasing consumers' feelings of personal connection to the product.

- H2a:** When personal connection stems from product experience, activating time leads to more favorable attitudes than activating money.

- H2b:** When personal connection stems from product possession, activating money leads to more favorable attitudes than activating time.

To test these hypotheses, four experiments were conducted. The first experiment examines the case of a largely experiential possession, iPod, revealing more favorable product attitudes when consumers think about the time (vs. the money) they spent on the product. The subsequent studies further examine the effect, showing that such a shift cannot

be explained by mere consumption valence (experiment 2), nor does it require explicitly asking consumers to think about the time spent with a product versus money spent on a product. Instead, the time versus money effect appears to be driven by heightened feelings of personal connection with the product (experiments 1, 3, and 4), and occurs even when the constructs of time and money are implicitly activated (experiments 2 and 4). Additional results show that activating time tends to lead to a greater focus on one's experience using the product, whereas activating money leads to a greater focus on one's value from having the product (experiment 2). That is why in the more typical case, where personal connection stems from product experience, activating time boosts product attitudes. However, for certain products (i.e., prestige possessions; experiment 3) and for certain consumers (i.e., high materialists; experiment 4) where personal connection stems from merely possessing the product, activating money instead boosts product attitudes.

THE IPOD EXPERIMENT 1: WHEN TIME > MONEY

In Experiment 1, we examined the basic effect: does thinking about the time spent with a product versus the money spent on a product differentially impact attitudes towards the product? Further, to gain insight into the underlying process, we included a control condition, measured feelings of personal connection with the product, and examined participants' spontaneous thoughts generated by the activation of time or money.

Method

One hundred and fifteen students at a large west coast university (42% male, mean age = 20) were paid \$5 to participate in a consumer behavior study on iPods—a product in which the student sample had invested considerable amounts of both time and money. The experiment was a single-factor between-subjects design: the activated construct (time or money) was manipulated and a control condition (no question) was included.

All participants were presented with a questionnaire depicting the iPod logo at the top of the first page. Participants in the time condition were asked, “How much time have you spent on your iPod?” Participants in the money condition were asked, “How much money have you spent on your iPod?” Both groups responded to this initial priming question on a seven-point scale (1 = none at all, 7 = a lot). Participants in the control condition were not asked an initial question.

Next, to gain insight into the thinking associated with temporal versus monetary mindsets, participants were asked, “When considering your iPod, what thoughts come to your mind?” Two coders, blind to the hypotheses, coded the responses for valence and personal connection. For valence, the coders counted the number of positive thoughts (e.g., “love music, so it’s worth it;” $\alpha = .93$) and negative thoughts (e.g., “it’s been a waste;” $\alpha = .91$). As an index of personal connection, the coders counted the number of references participants made to themselves with respect to the product through mentions of “I,” “me,” or “my” (e.g., “I usually listen to my iPod while I exercise;” $\alpha = 1.00$).

Following spontaneous thought generation, participants reported their attitudes toward iPod using three seven-point semantic differential scales (unfavorable/favorable; bad/good, negative/positive; $\alpha = .90$). Then, as a more precise process measure, participants were asked to report their feelings of personal connection to the product by rating the extent

to which they agree with four statements: “Listening to my iPod represents who I am;” “...is a voluntary choice;” “...reflects the type of person I am;” and “...represents the kind of activity I often think about” (1 = strongly disagree; 7 = strongly agree; $\alpha = .73$; Reed, Aquino, and Levy 2007).

Finally, to control for the actual amount of time and money participants spent on their iPod, participants wrote the average number of hours they spent listening to their iPod per week, as well as the dollar amount they had spent on their iPod, including accessories. Participants who indicated that they did not actually own an iPod (7%) were removed from the analyses below. Upon completing the questionnaire, participants were debriefed, paid, and thanked.

Results and Discussion

First, an ANCOVA was conducted on product attitudes, with the actual amount of time and money participants had spent on their iPods included as covariates. Although the actual amount of time spent revealed a positive main effect on product attitudes ($F(1, 102) = 6.05, p < .05$), neither covariate interacted with the independent variable (p 's $> .10$). More importantly, we found the predicted effect of condition ($F(2, 102) = 8.64, p < .001$). In support of hypothesis 1, pairwise comparisons revealed that participants led to think about time ($M = 6.28$) reported more favorable attitudes toward iPod than did participants led to think about money ($M = 5.28; p < .001$). Moreover, indicative of distinct effects of activating time versus activating money, the attitudes of participants in the control condition ($M = 5.81$) were significantly less favorable than those in the time condition ($p <$

.05) and more favorable than of those in the money condition ($p < .05$). These results, therefore, suggest that irrespective of the actual amount of time or money one has spent on a product, leading consumers to think about their time spent on the product can boost product attitudes, whereas leading consumers to think about their money spent on the very same product can hurt product attitudes.

To gain insight into what might be driving the effect, we examined the thoughts participants generated upon being primed with either time or money. An ANCOVA on the personal connection index revealed only an effect of condition ($F(2, 102) = 9.24, p < .001$). Pairwise comparisons showed that participants primed with time ($M = 1.22$) made more personal references relating to the product than did participants primed with either money ($M = .57, p < .05$) or not primed at all ($M = .15, p < .001$). Participants in the money and control conditions differed only marginally in their number of personal references ($p < .10$).

For more direct process insight, we examined whether the time versus money effect was indeed driven by feelings of personal connection to the product. An ANCOVA on ratings of personal connection showed that the actual amount of time spent had a main effect on personal connection ($F(1, 102) = 8.11, p < .01$), but neither covariate significantly interacted with the independent variable (p 's $> .10$). More importantly, we found the predicted effect of condition ($F(2, 102) = 15.30, p < .001$). Pairwise comparisons showed that participants in the time condition ($M = 5.14$) felt more connected to the product than did either those in the money condition ($M = 3.81; p < .001$) or those in the control condition ($M = 4.39; p < .01$). Additionally, those in the money condition felt less personally connected to the product than those in the control condition ($p < .05$).

Further, a mediation analysis among participants in the time and money conditions revealed a mediating role of personal connection (Baron and Kenny 1986; Sobel 1982). First, product attitudes were regressed on condition ($\beta = -.44, t = -4.15, p < .001$). Next, personal connection was regressed on condition ($\beta = -.62, t = -6.71, p < .001$). Then, product attitudes were regressed on personal connection ($\beta = .52, t = 5.19, p < .001$). Finally, product attitudes were regressed on both condition and personal connection, and supportive of mediation, the effect of condition became insignificant ($\beta = -.19, t = -1.48, NS$) whereas the effect of personal connection remained highly significant ($\beta = .41, t = 3.19, p < .01$; Sobel $z = -4.11, p < .001$). Of note, when a mediation analysis was conducted with product attitudes as the mediator and personal connection as the dependent variable, the effect of condition remained highly significant ($p < .001$) when personal connection was regressed on both condition and product attitudes, and the Sobel test was weaker ($p < .05$). This overall pattern suggests that personal connection drives the effect on product attitudes, rather than product attitudes subsequently influencing feelings of personal connection.

These results suggest that directing consumers' attention to time (vs. money) makes them more likely to think about their personal connection to that product, resulting in more favorable attitudes. However, one salient alternative explanation involves basic principles of valence. Perhaps thinking about spending money evokes negative thoughts (as it relates to the cost of product consumption), whereas thinking about spending time evokes more positive thoughts (as it relates to the benefits of consuming the product). In other words, not many would enjoy spending money to purchase a product, but people almost certainly would enjoy spending time using a product. To explore this possibility, we examined the valence of the thoughts generated by participants following the time and money

manipulations, and found the ANCOVA's results to reveal insignificant effects of condition ($F_{\text{pos}}(2, 102) = 1.18, p > .10$; $F_{\text{neg}}(2, 102) = .09, p > .10$). That is, neither positive thoughts ($M_{\text{time}} = .76, M_{\text{money}} = .64, M_{\text{control}} = 1.05; p$'s $> .10$) nor negative thoughts ($M_{\text{time}} = .36, M_{\text{money}} = .35, M_{\text{control}} = .33; p$'s $> .10$) varied across conditions. To further explore this alternative explanation, we conducted a second version of this experiment with one slight change in the manipulation. We asked participants ($N = 104$), "How much time [money] have you spent on your iPod—including buying it and downloading music?" Even with the additional phrase to encourage those in both the time and money conditions to think of their expenditures as costs, the results replicated, thereby casting further doubt on the alternative explanation. In the next experiment, we delve into our proposed account and the alternative account in greater detail, testing the basic effect of activating time versus money in a longitudinal field experiment.

THE MBA EXPERIMENT 2: FOCUSING ON EXPERIENCE VS. POSSESSION

Building on the results of experiment 1, experiment 2 sought to shed additional light on the process by which activating time (vs. money) elicits more positive attitudes. The experiment was designed to test the assertion that activating the construct of time leads individuals to focus on their experience using the product, whereas activating the construct of money leads individuals to focus on the value they gain from merely owning or possessing the product. Consequently, subsequent product attitudes should depend on how positive one's experience was with the product (when primed with time) and how positively one values possession of the product (when primed with money). Importantly,

this experiment also served to further disentangle the influence of time (vs. money) in highlighting the value gained from experiencing (vs. having) the product—both benefits gained from product consumption—from the alternative account whereby time highlights product consumption, whereas money highlights the cost of product acquisition (which would necessarily be more negatively-valenced).

In addition, we relied on a different method of activating time versus money by using a more subtle method with greater external validity. Whereas the manipulation in experiment 1 involved a preliminary question pertaining to the amount of time or money one has spent on the product, the manipulation in experiment 2 involved supraliminally priming the concepts of time or money through the content of incidental banner advertisements visible during the course of the online questionnaire. Such a change was made to increase convergent validity and to decrease the chance of demand.

Method

Fifty-one MBA students at a west coast university (47% male; ranging in age from 24 to 41 years, $M = 28$) completed their participation in this online study for the chance to win \$100 cash. The study consisted of two parts. The first part of the study was conducted under the guise of a “Business School Brand Audit” intended to assess the MBA experience. During the last week of the school year, all graduating students at the business school received an email requesting their participation in a Business School Brand Audit survey; 141 students responded. Participants were asked to rate their valuation of their business school experience in terms of their “overall happiness,” “social life in general,”

and “friendships made” (1 = very negative; 7 = very positive), compiled to create an Experience Index ($\alpha = .72$). On the same seven-point scales, participants were also asked to rate their valuation of possessing a degree from the business school in terms of the “value of the Business School degree,” “value of the business education,” and “financial investment,” compiled to create a Possession Index ($\alpha = .66$). By measuring the MBAs’ value gained from using the product (i.e., their MBA experience) as well as their value gained from having the product (i.e., possessing an MBA degree), we could distinguish participants with a more positive versus more negative instantiation of each. Participants were thanked for their time, and the winner was compensated.

One month later, the second part of the study was administered. The same students were emailed a request to partake in an ostensibly unrelated study on business schools in general, enticed with the chance to win \$100. Randomly-assigned, the time and money primes were embedded into banner advertisements presented at the top of the computer screen and visible throughout the duration of the online survey. Participants in the time condition first saw an adapted ad from Citibank that read, “For a guaranteed return on investments, try spending an hour with your best friend.” Later in the study, these participants were exposed to an ad for a magazine subscription company displaying the magazines *Time*, *Time Out*, and *This Week*. In contrast, participants in the money condition initially saw an adapted Citibank ad reading, “For a guaranteed return on investments, try managing your money with us.” Later these participants were exposed to an ad for a magazine subscription company displaying the magazines *Fortune*, *Smart Money*, and *Money* (see appendix A).

At the end of the online survey, participants reported their attitudes toward their business school using three seven-point semantic differential scales (unfavorable/favorable; bad/good, negative/positive; $\alpha = .89$). Finally, participants were debriefed and thanked, and the winner was compensated.

Results and Discussion

To examine whether activating time versus money leads to a differential focus on one's experience with the product versus one's possession of the product, product attitudes were regressed on the independent variables prime, the Experience Index, the Possession Index, and the interaction terms for the combinations of these three variables (R^2 of .99 for the full model). The results revealed that prime alone had an insignificant main effect ($\beta = -.01, t = -.10, p > .10$), but that the Experience Index ($\beta = .04, t = 2.29, p < .05$) and the Possession Index ($\beta = .07, t = 3.58, p = .001$) both had significant positive main effects on product attitudes. Although the three-way interaction ($\beta = -.03, t = -.72, p > .10$) and the two-way interaction between the Experience and Possession Indices ($\beta = -.01, t = -.34, p > .10$) were not significant, there was an interaction effect between the prime and Experience Index ($\beta = .08, t = 3.98, p < .001$). As evident in figure 2, the slope of experience was significant and positive when primed with time ($\beta = .87, t = 4.12, p < .001$), but not significant when primed with money ($\beta = -0.23, t = -1.30, p > .10$). This pattern suggests that the value from one's experience using the product only influenced product attitudes when participants were primed with time, but not money. Further, there was also a significant interaction effect between the prime and the Possession Index ($\beta = -.04, t = -$

2.10, $p < .05$). As shown in figure 3, the slope of possession was significant and positive when primed with money ($\beta = .81$, $t = 4.23$, $p < .001$), but not significant when primed with time $\beta = .21$, $t = .99$, $p > .10$). This pattern suggests that the value from merely possessing the product influenced attitudes when participants were primed with money, but not when primed with time.

Together these results are consistent with the proposed process whereby activating time leads consumers to focus on their experience using the product, which then drives product attitudes. In contrast, activating money appears to lead consumers to focus on the value of product possession, which plays out in subsequent product attitudes. These processes are distinct from an alternative account wherein activating time merely leads consumers to consider product consumption, whereas activating money leads consumers to consider the cost accrued purchasing the product. Instead, both time and money seem to lead consumers to consider the benefits of product consumption, but to distinct benefits: time to usage and money to possession. These findings suggest that for time to boost product attitudes (like in experiment 1), individuals must have had a positive experience using the product. Moreover, this effect may be able to offset negative product attitudes in instances wherein the value of possessing the product is negative.

THE DESIGNER JEANS EXPERIMENT 3: WHEN MONEY > TIME

Experiment 1 showed that for iPods—an experiential product—activating time (vs. money) led to more favorable product attitudes by increasing consumers' feelings of personal connection to the product. Experiment 2 provided additional insight into the

processes evoked by the activation of time versus money, with time directing focus to participants' experience using the product and money directing focus to participants' value from possessing the product. Together, these findings hint at conditions where activating money (rather than time) may lead to more favorable attitudes—for products where the mere act of spending money to own the product communicates something about one's personal identity (as in the case of prestige possessions). Thus, the objective of experiment 3 was to examine whether the time versus money effect found for experiential products can be reversed for prestige possessions, where personal connection is more likely to stem from having than from using.

Method

One hundred and forty-two students at a large west coast university (40% male, mean age = 20) participated in the experiment in exchange for \$5. The design utilized was a 3 (Prime: Time vs. Money vs. Control) x 2 (Purchase Type: Experience vs. Possession) between-subjects design.

Participants were presented with a Consumer Survey in which the first question contained the prime and purchase type manipulations. Randomly-assigned, participants were asked to rate on a seven-point scale (1 = none at all, 7 = a lot) either how much *time* or how much *money* they had spent in the last year on either going out to restaurants (in the experience conditions) or on designer jeans (in the possession conditions; Khan and Dhar 2006; Van Boven and Gilovich 2003). Participants then reported their attitudes toward their purchase using three seven-point semantic differential scales (unfavorable/favorable;

bad/good, negative/positive; $\alpha = .89$). Participants in the control conditions were asked to report their attitudes towards the purchase, without first being asked the priming question.

To tap the underlying process, we asked participants to rate their feelings of personal connection to the purchase on seven-point Likert scales, using the same items as in experiment 1 (i.e., “represents who I am;” “reflects the type of person I am;” etc.; $\alpha = .90$; Reed et al. 2007).

Next, adapted from Van Boven and Gilovich (2003), manipulation checks were included to assess the extent to which participants perceived their purchase to be “experiential (i.e. involves the acquisition of a life experience—an event or series of events that you personally encounter or live through)” and “material (i.e. a material possession—a tangible object that you obtain and keep in your possession)” (1 = not at all, 7 = a lot). To decrease concern of potential confounds, we also measured whether the purchase was seen as “hedonic (i.e., pleasant and fun)” and “utilitarian (i.e., useful, practical, functional)” (Dhar and Wertenbroch 2000). Participants perceived both purchases to be relatively hedonic ($M_r = 5.55$ vs. $M_j = 5.23$; $F(1, 120) = 2.52, p > .10$) and not particularly utilitarian ($M_r = 3.76$ vs. $M_j = 4.45$; $F(1, 120) = .84, p > .10$).

Finally, to control for the actual amount of time and money spent on the purchase, participants were asked to write the dollar amount they had spent, as well as the total number of hours they spent eating out at restaurants [wearing their jeans] in the last month. At the end of the questionnaire, participants indicated whether they had eaten at a restaurant (100% had) and whether they owned a pair of designer jeans ($n = 14$ did not, and were eliminated from the analyses to decrease noise). Upon completion, participants were debriefed, paid, and thanked.

Results and Discussion

To test whether the manipulations operated as intended, a 3 (Prime: Time vs. Money vs. Control) x 2 (Purchase Type: Experience vs. Possession) ANCOVA was run on each purchase type check. As expected, participants considering going out to restaurants ($M = 4.79$) reported their purchase to be more experiential than participants considering their pair of jeans ($M = 2.83$; $F(1, 120) = 49.14, p < .001$). In turn, participants considering jeans ($M = 5.23$) reported their purchase to be more material than participants considering going out to restaurants ($M = 4.12$; $F(1, 120) = 8.83, p < .01$). No other effects were significant.

Next, to test the effects of activating time versus money for each type of purchase, a 3 (Prime) x 2 (Purchase Type) ANCOVA was conducted on purchase attitudes, with actual amount of time and money spent included as covariates. The results showed that although the actual amount of money spent had a main effect on attitudes ($F(1, 120) = 5.89, p < .05$), neither covariate interacted with the independent variable (p 's $> .10$). More importantly, we found the predicted interaction ($F(2, 120) = 14.57, p < .001$). Pairwise comparisons showed that amongst participants considering an experiential purchase, those primed with time ($M = 5.80$) reported more favorable attitudes than those primed with money ($M = 4.60$; $p < .001$) and than those in the control condition ($M = 5.14$; $p < .05$). Those primed with money had marginally less favorable attitudes than of those in the control condition ($p < .10$).

However, for the prestige possession, the reverse effect occurred: Participants primed with money ($M = 5.89$) reported more favorable attitudes relative to those primed with time ($M = 4.43$; $p < .001$) and those in the control condition ($M = 4.95$; $p < .05$). There

were no significant differences between the control condition and those primed with time ($p > .10$).

To examine why this pattern of results occurred, we conducted the ANCOVA on the personal connection index. Although the amount of money spent had a main effect ($F(1, 120) = 9.82, p < .01$), neither covariate interacted with the independent variable (p 's $> .10$). Moreover, the results revealed the expected interaction ($F(2, 120) = 10.30, p < .001$). Pairwise comparisons showed that for the prestige possession, greater feelings of personal connection were felt in the money prime condition ($M = 4.46$) than in the time condition ($M = 2.99; p < .01$) and than in the control ($M = 3.23; p < .05$). Time prime and the control did not differ ($p > .10$). For the experiential purchase, however, priming time led to increased feelings of personal connection compared to priming money ($M_{time} = 3.85, M_{money} = 2.65; p < .01$), and marginally greater feelings of personal connection than in the control ($M_{time} = 3.85, M_{control} = 3.08; p < .10$). Money prime and the control did not differ ($p > .10$).

To more directly examine process, two sets of mediation analyses were conducted with personal connection as the mediator. The first examined the effect of priming time versus money on attitudes towards the experiential purchase. The second examined the effect of priming time versus money on attitudes towards the prestige possession. First, amongst participants considering an experiential purchase, attitudes were regressed on prime ($\beta = .54, t = 4.52, p < .001$). Next, personal connection was regressed on prime ($\beta = .41, t = 3.19, p < .01$). Then, purchase attitudes were regressed on personal connection ($\beta = .62, t = 5.57, p < .001$). Finally, when purchase attitudes were regressed on both prime and personal connection, the effect of prime significantly reduced ($\beta = .34, t = 3.03, p < .01$) whereas the

effect of personal connection remained significant ($\beta = .48, t = 4.23, p < .001$; Sobel $z = 2.77, p < .01$), supportive of mediation.

Second, amongst participants considering a prestige possession, attitudes were regressed on prime ($\beta = -.50, t = -3.46, p = .001$). Next, personal connection was regressed on prime ($\beta = -.44, t = -3.01, p < .01$). Then, purchase attitudes were regressed on personal connection ($\beta = .67, t = 5.43, p < .001$). Finally, purchase attitudes were regressed on both prime and personal connection, and supportive of mediation, the effect of prime significantly reduced ($\beta = -.25, t = -1.87, p > .05$) whereas the effect of personal connection remained highly significant ($\beta = .56, t = 4.19, p < .001$; Sobel $z = -2.63, p < .01$). Together these results suggest that feelings of personal connection drive consumers' attitudes towards their purchases. In the case of experiential purchases, priming time heightens these feelings of personal connection, thereby eliciting more favorable attitudes. However, for prestige possessions, priming money appears to heighten feelings of personal connection, resulting in more favorable attitudes.

THE CAR EXPERIMENT 4: THE ROLE OF CONSUMERS' MATERIALISM

Experiment 3 compared product type, revealing that for experiential purchases, activating time leads to more favorable attitudes, but for prestige possessions, activating money leads to more favorable attitudes. To ensure that these differential effects were indeed determined by the products' value as an experience versus a possession—rather than some other distinguishing feature—experiment 4 examined a single product that is experiential for some consumers, but more of a prestige possession for others, namely one's

car. Indeed, this next experiment identified individuals who largely define themselves based on their possessions (i.e. materialists) to test if consumer type, like product type, can moderate the effect of activating time versus money on product attitudes.

Further, in experiment 4, we examined whether the effects of drawing attention to time versus money persist with even more subtle primes of the constructs—in part for generalizability and in part to assuage concerns of demand (as participants should not be able to align their attitudes with any suspected hypotheses if the time and money manipulations occur without their being aware of them). Thus, we activated time and money using a supraliminal nonconscious priming technique (Chartrand and Bargh 1996; Winter, Uleman, and Cunniff 1985) prior to measuring product attitudes.

Finally, experiment 4 was conducted among a national sample to ensure that the demonstrated effects of activating time versus money are not specific to a certain age group or demographic, for whom time and money may be particularly valued.

Method

Sixty-four individuals (36% male) representing a range of ages (21 to 69 years; $M = 35$) and occupations (e.g., engineer, homemaker, student) participated in the online experiment in exchange for \$5.

A week prior to the experiment, participants completed a battery of scales including an 18-item individual difference measure of materialism, which was used to identify individuals who highly value possessions as an indicator of self worth ($\alpha = .91$; Richins and Dawson 1992). For these materialistic individuals, the value of consumption comes more

from possession than from usage, and possessions communicate one's level of prestige (Richins 1994). Indeed, participants who scored high on the materialism scale ($M = 5.17$) valued owning their car (in terms of pride of ownership, prestige, and financial investment; $\alpha = .81$) more than participants low on the materialism scale ($M = 3.93$; $F(1, 65) = 13.86$, $p < .001$). Participants who scored low on the materialism scale ($M = 6.34$) valued their experience using their car (in terms of comfort, how well it drives, and how useful it is; $\alpha = .79$) more than high materialism participants ($M = 5.85$; $F(1, 65) = 5.53$, $p < .05$).

Just before beginning the advertised Car Survey, participants were asked to complete an ostensibly unrelated questionnaire that was described as measuring how people construct meaningful English sentences. Based on this pretense, participants completed a sentence construction task (adapted from Srull and Wyer 1979), during which they were exposed to primes of either time or money. First, participants were given 18 sets of four randomly arranged words and were told that the words in each set could be used to form two different three-word sentences. Their task was to underline the three words that composed the first sentence which came to mind. The sentences formed from nine of the sets were filler items; the remaining nine items included words associated with either time or money. For example, participants in the time condition were asked to construct a sentence out of the sets of words: *sheets the change clock* and *are they old we*; participants in the money condition were asked to construct a sentence out of the sets of words: *sheets the change price* and *are they wealthy we*. All were given three minutes to construct as many sentences as possible.

Upon completing the sentence construction task, participants filled out the Car Survey in which they reported their attitudes toward their car using three seven-point

semantic differential scales (unfavorable/favorable, bad/good, negative/positive; $\alpha = .92$). Participants also indicated their feelings of personal connection to their cars using the same four items as in the prior experiments ($\alpha = .91$). Finally, to control for the actual amount of time and money participants had invested in their cars, participants wrote the dollar amount paid for their car as well as the average number of hours per week they spent driving. Upon completing the survey, participants were debriefed, paid, and thanked.

Results and Discussion

To assess whether priming time versus money affects product attitudes differently for individuals who largely define themselves by their possessions, participants' attitudes towards their cars were regressed on prime, participants' materialism score, and the interaction between the two, controlling for the actual amount of time and money participants spent on their cars. The results revealed only the interaction between prime and level of materialism to significantly influence product attitudes ($\beta = -.53$, $t = -4.36$, $p < .001$; see figure 4). Indeed, none of the other variables—actual amount of time spent ($\beta = -.13$, $t = -1.10$, $p > .10$), actual amount of money spent ($\beta = .09$, $t = .73$, $p > .10$), prime ($\beta = -.07$, $t = -.64$, $p > .10$), or materialism ($\beta = -.03$, $t = -.28$, $p > .10$)—showed main effects. To more closely examine the interaction, a spotlight analysis was performed at one standard deviation below the mean of materialism revealing a significant difference ($\beta = 0.56$, $t = 2.84$, $p < .01$): low materialists reported more favorable attitudes towards their cars when primed with time than when primed with money. A similar spotlight analysis performed at one standard deviation above the mean of materialism also revealed a significant difference

($\beta = -0.74, t = -3.58, p < .001$): high materialists reported more favorable attitudes towards their cars when primed with money than when primed with time.

To examine why this pattern of results occurred, we regressed participants' feelings of personal connection with their cars on the same set of variables: prime, materialism, the interaction between prime and materialism—again controlling for the actual amount of time and money participants spent on their cars. As expected, the results revealed only an interaction effect ($\beta = -.38, t = -3.04, p < .01$). None of the other variables—actual amount of time spent ($\beta = -.07, t = -.60, p > .10$), actual amount of money spent ($\beta = .15, t = 1.19, p > .10$), prime alone ($\beta = -.05, t = -.45, p > .10$), or materialism alone ($\beta = .13, t = 1.04, p > .10$)—showed significant effects. Again, to more closely examine the interaction effect, a spotlight analysis was performed at one standard deviation below the mean of materialism revealing a significant difference ($\beta = 0.49, t = 1.97, p = .05$): low materialists felt more connected to their cars when primed with time than when primed with money. A similar spotlight analysis performed at one standard deviation above the mean of materialism revealed a significant difference ($\beta = -0.64, t = -2.52, p < .05$) such that high materialists felt more connected to their cars when primed with money than when primed with time.

To more directly examine process, two sets of mediation analyses were conducted with personal connection as the mediator. Using a median split to distinguish participants who were highly materialistic from those who were not, the first set of analyses was conducted to examine the effect of priming time versus money amongst the low materialists. First, attitudes were regressed on prime ($\beta = .35, t = 2.05, p < .05$). Next, personal connection was regressed on prime ($\beta = .37, t = 2.17, p < .05$). Then, product attitudes were regressed on personal connection ($\beta = .81, t = 7.57, p < .001$). Finally, when

product attitudes were regressed on both prime and personal connection, the effect of prime became insignificant ($\beta = .06, t = .51, p > .10$) whereas the effect of personal connection remained significant ($\beta = .79, t = 6.76, p < .001$; Sobel $z = 2.09, p < .05$), supportive of mediation.

Second, amongst the high materialists, product attitudes were regressed on prime ($\beta = -.48, t = -3.12, p < .01$). Next, personal connection was regressed on prime ($\beta = -.36, t = -2.17, p < .05$). Then, product attitudes were regressed on personal connection ($\beta = .86, t = 9.37, p < .001$). Finally, product attitudes were regressed on both prime and personal connection, and supportive of mediation, the effect of prime significantly reduced ($\beta = -.20, t = -2.19, p > .01$) whereas the effect of personal connection remained highly significant ($\beta = .78, t = 8.47, p < .001$; Sobel $z = -2.11, p < .05$).

Together these results showed that for all participants, both those high and low in materialism, feelings of personal connection drove attitudes towards one's car. Importantly, however, these feelings of personal connection were differently activated for the two types of consumers. For materialists (those who highly value the mere possession of their cars), activating money fostered feelings of personal connection, thus leading to more favorable attitudes towards their cars. However, for the others who largely value the experience of using their cars, activating time increased feelings of personal connection, in turn boosting attitudes. These findings thus support our proposition that the influence of activating time (vs. money) on product attitudes depends on where consumers extract their feelings of personal connection with the product.

GENERAL DISCUSSION

The findings of four experiments show that product attitudes can be shifted what is as subtle and as pervasive as references to time versus money. Heightened feelings of personal connection that consumers garner from products (i.e., the extent to which the product is “me”) appear to drive the effect of activating time (vs. money) on product attitudes. Typically these feelings of personal connection stem from focusing on one’s experiences gained using the product, which become prompted by mentions of time—thus resulting in a favorable time shift. However, for certain products (i.e., prestige possessions) and consumers (i.e., materialists), these feelings of personal connection stem from mere ownership of the product, which gains focus when money is mentioned—thus resulting in a favorable money shift. So, whether activating time or money will boost product attitudes depends on where consumers extract their feelings of personal connection with the product: experience or possession. Further, this time versus money effect not only occurs when consumers are led to think about the amount of time or money they had spent on the product (experiments 1 and 3), but is robust across more subtle manipulations—where the constructs are embedded in banner ads visible to consumers when reporting their attitudes (experiment 2) and where the constructs are activated nonconsciously (experiment 4).

Shifting Product Attitudes

These findings support recent research suggesting that one’s investment of time and money are not subjectively equivalent (Devoe and Pfeffer 2007a; 2007b), and extend it by identifying the downstream effects of considering one’s investment of each. One insight

gained is that time and money do not just differ in terms of their ambiguity or fungability (Leclerc et al. 1995; Okada and Hoch 2004; Saini and Monga 2008) or their quantifiable subjective valuations (Zauberman and Lynch 2005); importantly, they also differ in the degree to which they tap personal processes (Reed et al. 2007). Moreover, the degree to which personal connection is evoked seems to drive product evaluations—revealing the instability of consumers’ attitudes. How might we reconcile these findings showing that consumers’ attitudes towards the products they know and use can shift quite easily with the traditional view of attitudes as evaluations that are stored in memory and that persist over time—and indeed which are so stable as to systematically influence information processing (Sherif and Cantril 1947; Wilson, Lindsay, and Schooler 2000)? One way to couch the current findings is in the context of decision making research which highlights the power of contextual manipulations (e.g., option framing, choice set construction) to shift preferences (Simonson 1989; Simonson and Tversky 1992). We contribute to this stream by showing that something as subtle as the conscious or nonconscious activation of a particular construct can influence how consumers evaluate products. Indeed, the psychological context in which attitudes are elicited seems to matter.

More specifically, this research shows that activating time (vs. money) can boost consumers’ attitudes towards experiential products by leading individuals to focus on their experiences gained with the product. However, another possible explanation for this effect is that the specific constructs, time and money, are valenced as they apply to consumer products. For instance, one might argue that money is always negative because it involves the costs associated with acquiring a product, whereas time is (nearly) always positive because it involves the benefits of consuming the product. Although we have provided

evidence to suggest that this account is unlikely (in experiments 1 and 2), it begs an interesting question: Would the favorable effect of activating time (vs. money) also occur if the product was free, and one's temporal expenditure was a cost?

To examine this question, we conducted a field experiment at an outdoor music concert in San Francisco. The concert was free and required extensive amounts of time waiting in line to ensure getting decent seats ($M = 2.82$ hours). Prior to the start of the concert, we either activated time or money by asking random individuals standing in the queue either: "How much time will you have spent (before the concert starts) to see this concert today?" or "How much money will you have spent in order to see this concert today?" Even in this case where time spent was a cost, activating time led to more favorable product attitudes than activating money. And, this effect was mediated by participants' feelings of personal connection.

Notably, this time versus money effect found amongst the concert-goers occurred irrespective of the actual amount of time the participants spent waiting in line, suggesting that it is not one of self-perception. In fact, controlling for the amount of time and money individuals actually invested in the product across all of the reported experiments, we found that the effect was not influenced by the amount of either resource spent. Therefore, it is unlikely that participants merely deduced their liking of the product by considering the amount of time (or money) they were willing to spend on it. As further evidence against a self-perception explanation, we found the effect of activating time versus money to extend from a manipulation in which we asked participants to consider how much time or money they had spent on the product to a nonconscious priming technique. Simply making people think about time versus money (in general) can shift attitudes towards whatever product is

under consideration. And, this effect is robust enough to play out in the noisy environment of the real world, when the product is consumed in real-time. As evidence, we employed the same nonconscious priming technique as used in experiment 4 to activate either time or money amongst consumers entering a café. Then measuring attitudes as they exited (between two minutes and one hour and eleven minutes later, $M = 15$ minutes), we found that those who had been primed with time reported significantly more favorable attitudes towards the café than those who had been primed with money.

Even though the time versus money effect is not driven by self-perception, it does have implications for the vast literature on intrapersonal consistency, which is built on the premise that individuals are motivated towards consistency between their attitudes and behavior. When the two are inconsistent, individuals shift their attitudes to more closely align with their behavior (Festinger 1957). Our work contributes to this stream of research by showing that an expenditure of time (vs. money) is generally more closely connected to the self—an effect that may result in differential motivation to shift attitudes. So, although consistency paradigms have tended to interchange temporal and monetary spending as their behavioral manipulations (Festinger and Carlsmith 1959), the current findings suggest that time might be a greater source of dissonance than money, and thus a stronger driver of individuals' ultimate attitudes.

The Role of Personal Connection

The role of personal connection is sizeable and consistent across these studies. However, the exact role played by personal connection still merits additional examination.

Perhaps the closer one feels with the product, the more favorable one's attitudes, which then further fuels feelings of connection. Although such an infectious mechanism remains unexplored in this work, some empirical evidence sheds some light on this question. First, the results of experiment 1 reveal a better fit when personal connection was the mediator and product attitudes the dependent variable (rather than the other way around). However, to more carefully examine the potential bi-directionality of the personal connection-attitudes relationship, longitudinal research that systematically measures both constructs across time is needed.

Perhaps more interestingly, future work could disentangle personal connection from (positive) attitudes. For example, in the case of food addictions, cigarette addictions, or even certain consumer-brand relationships (e.g., Microsoft), the consumer might experience close personal connection with the product but hold negative attitudes toward that product (Ramanathan and Williams 2007). In such cases, where increased personal connection is undesirable, evoking time (vs. money) might lead to *less* favorable attitudes.

From an applied perspective, this research sheds some light on a construct that marketing practitioners are eagerly trying to get a grasp on—consumer engagement. Motivated to strengthen their relationships with customers, marketers often feel they must increase the degree to which consumers' feel connected to the brand (Fournier 1998). However, little is known about how to boost consumers' sense of engagement with the brands they use, let alone what engagement is. Akin to research on interpersonal relationships which shows that strong relationships are ones wherein partners spend time together (Aron et al. 2000), the current results suggest that consumers' engagement with a brand is tied to the time consumers spend with it. Therefore, to actively foster feelings of

connection, brands should draw consumers' attention to their time spent and thus their experiences gained with the brand. Notably, however, not all brands or products will benefit from time shared with the consumer. We found that for prestige possessions, highlighting a large outlay of money appears to increase consumers' sense of personal connection. This research, therefore, more precisely suggests that brands can cultivate their consumer relationships by first considering how consumers most identify with the product (through experience or possession), and then highlighting either the time or money spent accordingly.

Future Research

This research poses several other intriguing questions that merit follow-on work. For example, boundary effects imposed by cultural contexts are one promising domain to explore. Of theoretic interest is whether the effect remains robust in cultures where the meaning of money and time fundamentally differ, as does the relationship of time and money to life satisfaction. For example, Williams and Lee (2007) demonstrate that individuals with highly interdependent selves (e.g., Chinese participants) report higher life satisfaction when they enjoyed high relationship wealth (e.g., having the time to do things they enjoyed), whereas individuals with highly independent selves report higher life satisfaction when they enjoyed high material wealth (e.g., luxury items that make life more comfortable). Such findings suggest that the favorable effects of activating time (vs. money) documented in this research may become stronger in cultures where an interdependent self is fostered.

These findings revealed that in the context of product perceptions, thinking about time (vs. money) increases feelings of personal connection, which then manifests in more

favorable attitudes. In the context of charitable giving, Liu and Aaker (2008) found that thinking about contributing time (vs. money) to an organization is associated with greater personal happiness. In the context of decision making, Saini and Monga (2008) demonstrated that thinking about spending time (vs. money) results in less cognitive processing and a greater reliance on heuristics. Taking a step back from these sets of findings, each in their distinct contexts with distinct mechanisms and dependent variables, there appears to be an overarching theme. Namely, individuals in a temporal mindset apparently weigh emotional factors more heavily than individuals in a monetary mindset, who seem more objective in their processing. In this light, the results of the current studies may begin to offer a parsimonious dual-route framework for viewing the widespread differences in the downstream effects of activating time and money. With the growing number of studies comparing the effects of thinking about time versus money, efforts should be made to examine the broader emotional role of time and the more utilitarian role of money in consumers' attitudes, behaviors, and decision making.

Finally, future research is needed to address the question: in addition to influencing consumers' attitudes, would activating time versus money also influence consumers' choices and behavior (Mogilner and Aaker 2008)? For instance, our results speak to prior findings that purchasing experiences rather than material goods leaves consumers happier, pointing out that the dichotomy between experiential and material purchases may not be so clear (Van Boven and Gilovich 2003). We found that leading consumers to reflect on the experiential versus material aspects of the very same purchase can allow them to extract greater happiness from that product. An important next step would be to explore the possibility that activating time (vs. money) might also motivate consumers to choose to

spend their money on experiences over material goods, thus bringing them greater happiness (Mogilner 2008). So, whether it is through changing one's perceptions or through changing what one does, this research hints that to be happier, it may, in general, be better to think in terms of time than in terms of money.

APPENDIX

BANNER ADVERTISEMENTS CONTAINING TIME OR MONEY PRIMES

Time Condition Ads

For a guaranteed return on investments,
try spending an hour with your best friend.

citi.com  Live richly.



Money Condition Ads

For a guaranteed return on investments,
try managing your money with us.

citi.com  Live richly.



REFERENCES

- Aaker, Jennifer (1999), "The Malleable Self: The Role of Self-Expression in Persuasion," *Journal of Marketing Research*, 36 (February), 45-57.
- Adler, Nancy E. and Alana Conner Snibbe (2003), "The Role of Psychosocial Processes in Explaining the Gradient Between Socioeconomic Status and Health," *Current Directions in Psychological Science*, 12 (August), 119-23.
- Allport, Gordon W. (1961), *Pattern and Growth in Personality*, New York: Holt, Rinehart, and Winston.
- Aron, Arthur, Christina Norman, Elaine Aron, Colin McKenna, and Richard E. Heyman (2000), "Couples' Shared Participation in Novel and Arousing Activities and Experienced Relationship Quality," *Journal of Personality and Social Psychology*, 78 (Feb), 273-84.
- Baron, Reuben and David Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (December), 1173-82.
- Bearden, William and Michael J. Etzel (1982), "Reference Group Influence on Product and Brand Purchase Decisions," *Journal of Consumer Research*, 9 (September), 183-94.
- Beggan, James (1992), "On the Social Nature of Nonsocial Perception: The Mere Ownership Effect," *Journal of Personality and Social Psychology*, 62 (February), 229-37.
- Belk, Russell W. (1988), "Possessions and the Extended Self," *Journal of Consumer Research*, 15 (September), 139-68.
- Bergadaa, Michelle M. (1990), "The Role of Time in the Action of the Consumer," *Journal of Consumer Research*, 17 (December), 289-302.
- Carstensen, Laura L., Derek M. Isaacowitz, and Susan T. Charles (1999), "Taking Time Seriously: A Theory of Socioemotional Selectivity," *American Psychologist*, 54 (March), 165-81.

- Chartrand, Tanya L. and John A. Bargh (1996), "Automatic Activation of Impression Formation and Memorization Goals: Nonconscious Goal Priming Reproduces Effects of Explicit Task Instructions," *Journal of Personality and Social Psychology*, 71 (September), 464-78.
- DeVoe, Sanford E. and Jeffrey Pfeffer (2007), "Hourly Payment and Volunteering: The Effect of Organizational Practices on Decisions about Time Use," *Academy of Management Journal*, 50 (August), 783-98.
- _____ (2007), "When Time is Money: The Effect of Hourly Payment on the Evaluation of Time," *Organizational Behavior and Human Decision Processes*, 104 (September), 1-13.
- Dhar, Ravi and Klaus Wertenbroch (2000), "Consumer Choice Between Hedonic and Utilitarian Goods," *Journal of Marketing Research*, 37 (February), 60-71.
- Diener, Ed and Martin E. P. Seligman (2004), "Beyond Money: Toward an Economy of Well-Being," *Psychological Science in the Public Interest*, 5 (July), 1-31.
- Dunn, Elizabeth W., Lara B. Aknin, and Michael I. Norton (2008), "Spending Money on Others Promotes Happiness," *Science*, 319 (March), 1687-88.
- Escalas, Jennifer E. and James R. Bettman (2005), "Self-Construal, Reference Groups, and Brand Meaning," *Journal of Consumer Research*, 32 (December), 378-89.
- Ferraro, Rosellina, Baba Shiv, and James R. Bettman (2005), "Let Us Eat and Drink, for Tomorrow We Shall Die: Effects of Mortality Salience and Self-Esteem on Self-Regulation in Consumer Choice," *Journal of Consumer Research*, 32 (June), 65-75.
- Festinger, Leon (1957), *A Theory of Cognitive Dissonance*, Stanford, CA: Stanford University Press.
- Festinger, Leon and James M. Carlsmith (1959), "Cognitive Consequences of Forced Compliance," *Journal of Abnormal Psychology*, 58 (March), 203-10.

- Fournier, Susan (1998), "Consumers and their Brands: Developing Relationship Theory in Consumer Research," *Journal of Consumer Research*, 24 (March), 343-73.
- Greenwald, Anthony G. and Mahzarin R. Banaji (1995), "Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes," *Psychological Review*, 102 (January), 4-27.
- Heath, Chip and Jack B. Soll (1996), "Mental Budgeting and Consumer Decisions," *The Journal of Consumer Research*, 23 (June), 40-52.
- Hetts, John J., Michiko Sakuma, and Brett W. Pelham (1999), "Two Roads to Positive Regard: Implicit and Explicit Self-Evaluation and Culture," *Journal of Experimental Social Psychology*, 35 (November), 512-59.
- James, Williams (1890), *The Principles of Psychology*, Vol. 1, New York: Henry Holt.
- Kahneman, Daniel and Amos Tversky (1979), "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, 47(March), 263-92.
- Khan, Uzma and Ravi Dhar (2006), "Licensing Effect in Consumer Choice," *Journal of Marketing Research*, 43 (May), 259-66.
- Kirmani, Amna and Peter Wright (1989), "Money Talks: Perceived Advertising Expense and Expected Product Quality," *Journal of Consumer Research*, 16 (December), 344-53.
- Kisielius, Jolita and Brian Sternthal (1986), "Examining the Vividness Controversy: An Availability-Valence Interpretation," *Journal of Consumer Research*, 12 (March), 418-31.
- Kleine, Susan S., Robert E. Kleine III, and Chris T. Allen (1995), "How Is a Possession 'Me' or 'Not Me'? Characterizing Types and an Antecedent of Material Possession Attachment," *Journal of Consumer Research*, 22 (December), 327-43.
- Lea, Stephen and Paul Webley (2006), "Money as Tool, Money as Drug: The Biological Psychology of a Strong Incentive," *Behavioral and Brain Sciences*, 29 (April), 161-209.

- LeBoeuf, Robyn (2006), "Discount Rates for Time Versus Dates: The Sensitivity of Discounting to Time-Interval Description," *Journal of Marketing Research*, 43 (February), 59-72.
- Leclerc, France, Bernd Schmitt, and Laurette Dube (1995), "Waiting Time and Decision Making: Is Time like Money?" *Journal of Consumer Research*, 22 (June), 110-19.
- Liu, Wendy and Jennifer Aaker (2007), "Do You Look to the Future or Focus on Today? The Impact of Life Experience on Intertemporal Choice," *Organizational Behavior and Human Decision Processes*, 102 (March), 212-25.
- Liu, Wendy and Jennifer Aaker (2008), "The Happiness of Giving: The Time-Ask Effect," forthcoming in the *Journal of Consumer Research*.
- Loewenstein, George (1987), "Anticipation and the Valuation of Delayed Consumption," *Economic Journal*, 97 (September), 666-84.
- Malkoc, Selin A. and Gal Zauberaman (2006), "Deferring versus Expediting Consumption: The Effect of Outcome Concreteness on Sensitivity to Time Horizon," *Journal of Marketing Research*, 43 (November), 618-27.
- Miller, Dale T., Julie S. Downs, and Deborah A. Prentice (1998), "Minimal Conditions for the Creation of a Unit Relationship: The Social Bond Between Birthdaymates," *European Journal of Social Psychology*, 28 (May/June), 475-81.
- Mogilner, Cassie (2008), "Pursuing Happiness: The Role of Time and Money," working paper, Stanford Graduate School of Business, Stanford, CA 94305.
- Mogilner, Cassie and Jennifer Aaker (2008), "The Impact of Time and Money on Consumer Behavior," working paper, Stanford Graduate School of Business, Stanford, CA 94305.
- Mogilner, Cassie, Jennifer Aaker, and Ginger Pennington (2008), "Time Will Tell: The Distant Appeal of Promotion and Imminent Appeal of Prevention," *Journal of Consumer Research*, 34 (February), 670-81.

- Nuttin, Jozef M. Jr. (1985), "Narcissism Beyond Gestalt and Awareness: The Name Letter Effect," *European Journal of Social Psychology*, 15 (July/September), 353-61.
- Okada, Erica Mina (2005), "Justification Effects on Consumer Choice of Hedonic and Utilitarian Goods," *Journal of Marketing Research*, 42 (February), 43-53.
- Okada, Erica Mina and Stephen J. Hoch (2004), "Spending Time versus Spending Money," *Journal of Consumer Research*, 31 (September), 313-23.
- Paulus, Delroy and Karen Levitt (1987). "Desirable Responding Triggered by Affect: Automatic Egotism?" *Journal of Personality and Social Psychology*, 52 (Feb), 245-59.
- Ramanathan, Suresh and Patti Williams (2007), "Immediate and Delayed Emotional Consequences of Indulgence: The Moderating Influence of Personality Type of Mixed Emotions," *Journal of Consumer Research*, 34 (August), 212-23.
- Ray, Souray (2008), "The Changing Nature of Luxury Goods and Services in China," <http://www.wpp.com/WPP/Marketing/ReportsStudies/IamnotrichbutIdeserveit.htm>.
- Reed, Americus II (2004), "Activating the Self-Importance of Consumer Selves: Exploring Identity Salience Effects on Judgments," *Journal of Consumer Research*, 31 (September), 286-95.
- Reed, Americus II, Karl Aquino and Eric Levy (2007), "Moral Identity and Judgments of Charitable Behaviors," *Journal of Marketing*, 71 (January), 178-93.
- Richins, Marsha L. (1994), "Special Possessions and the Expression of Material Values," *Journal of Consumer Research*, 21 (December), 522-33.
- Richins, Marsha L. and Scott Dawson (1992), "A Consumer Values Orientation for Materialism and its Measurement: Scale Development and Validation," *Journal of Consumer Research*, 19 (December), 303-16.

- Saini, Ritesh and Ashwani Monga (2008), "How I Decide Depends on What I Spend: Use of Heuristics is Greater for Time than for Money," *Journal of Consumer Research*, 34 (April), 914-22.
- Schults, Susan E., Robert E. Kleine, III, and Jerome B. Kernan (1989), "'These Are a Few of My Favorite Things': Toward an Explication of Attachment as a Consumer Behavior Construct," *Advances in Consumer Research*, Vol. 16, ed. Thomas Srull, Provo, UT: Association for Consumer Research, 359-66.
- Sherif, Muzafer and Hadley Cantril (1947), *The Psychology of Ego Involvements: Social Attitudes and Identifications*, New York: Wiley.
- Silverstein, Michael, Neil Fiske and John Butman (2005), *Trading Up: Why Consumers Want New Luxury Goods – and How Companies Create Them*, New York: Portfolio.
- Simonson, Itamar (1989), "Choice Based on Reasons: The Case of Attraction and Compromise Effects," *Journal of Consumer Research*. 16 (September), 158-74
- Simonson, Itamar and Amos Tversky (1992), "Choice in Context: Tradeoff Contrast and Extremeness Aversion," *Journal of Marketing Research*, 29 (August), 281-95.
- Sobel, Michael E. (1982), "Asymptotic Confidence Intervals for Indirect Effects in Structural Equations Models," in *Sociological Methodology*, Vol. 13, ed. Samuel Leinhardt, San Francisco, CA: Jossey-Bass, 290-312.
- Soman, Dilip (2001), "The Mental Accounting of Sunk Time Costs: Why Time is not Like Money," *Journal of Behavioral Decision Making*, 14 (July), 169-85.
- Srull, Thomas K. and Robert S. Wyer (1979), "The Role of Category Accessibility in the Interpretation of Information about Persons: Some Determinants and Implications," *Journal of Personality and Social Psychology*, 37 (October), 1660-72.
- Taylor, Shelley and Jonathon Brown (1988), "Illusion and Well-Being: A Social Psychological Perspective on Mental Health," *Psychological Bulletin*, 103 (March), 193-210.

- Thaler, Richard H. (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4 (May-June), 199-214.
- Trope, Yaacov and Nira Liberman (2000), "Temporal Construal and Time-Dependent Changes in Preference," *Journal of Personality and Social Psychology*, 79 (December), 876-89.
- Van Boven, Leaf and Laurence Ashworth (2007), "Looking Forward, Looking Back: Anticipation is More Evocative than Retrospection," *Journal of Experimental Psychology: General*, 136 (May), 289-300.
- Van Boven, Leaf and Thomas Gilovich (2003), "To Do or To Have: That is the Question," *Journal of Personality and Social Psychology*, 85 (December), 1193-1202.
- Vohs, Kathleen D., Nicole L. Mead and Miranda R. Goode (2006), "The Psychological Consequences of Money," *Science*, 314 (November), 1154-56.
- Williams, Patti and Aimee Drolet (2005), "Age-Related Differences in Responses to Emotional Advertisements," *Journal of Consumer Research*, 32 (Dec), 343-54.
- Williams, Tonya P. and Angela Y. Lee (2007), "Me and Benjamin: Transaction versus Relationship Wealth in Subjective Well-being," working paper, Kellogg School of Management, Northwestern University, Evanston, IL 60208.
- Wilson, Timothy D., Samuel Lindsey, and Tonya Y. Schooler (2000), "A Model of Dual Attitudes," *Psychological Review*, 107 (January), 101-26.
- Winter, Loraine, James S. Uleman, and Cathryn Cunniff (1985), "How Automatic Are Social Judgments?" *Journal of Personality and Social Psychology*, 49 (October), 904-17.
- Zauberman, Gal and John G. Lynch, Jr. (2005), "Resource Slack and Propensity to Discount Delayed Investments of Time versus Money," *Journal of Experimental Psychology: General*, 134 (February), 23-37.

FIGURE 1

CONCEPTUAL MODEL FOR THE EFFECT OF ACTIVATING TIME VS. MONEY ON
PRODUCT ATTITUDES

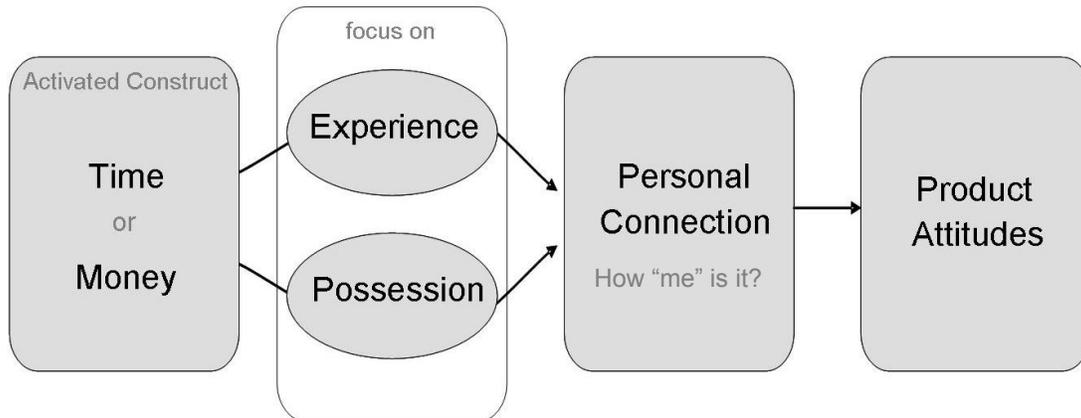


FIGURE 2

EXPERIMENT 2 RESULTS

**Interaction Effect:
Prime*Value from Experience**



FIGURE 3

EXPERIMENT 2 RESULTS

**Interaction Effect:
Prime*Value from Possession**

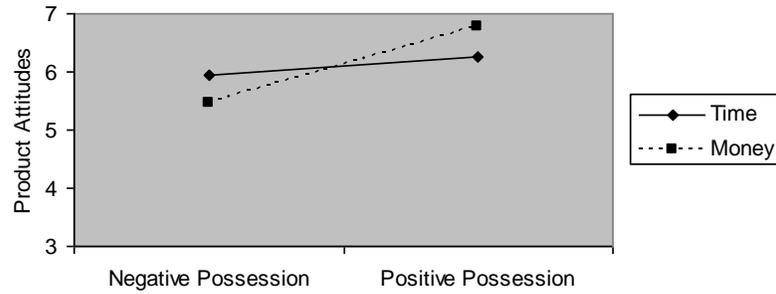


FIGURE 4

EXPERIMENT 4 RESULTS

**Interaction Effect:
Prime*Materialism**

