Life's Riches: the "Time > Money Effect"

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This series of experiments reveals consumers’ product attitudes to be systematically boosted by the activation of time versus money. This “time > money effect” occurs both when the constructs are activated explicitly (e.g., led to think of either the time or the money one has spent on the product) as well as implicitly (e.g., sentence scramble task). It is not a simple valence effect, whereby time is associated with the positive benefits of the product and money with its negative costs. Rather, activating a temporal (vs. monetary) mindset increases consumers’ feelings of personal connection with the product.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/14345/volumes/v36/NA-36

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SYMPOSIUM SUMMARY
Time: It’s a Personal Thing
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SESSION OVERVIEW
Consumer behavior is fundamentally temporally situated. For example, consumption experiences are extended in time, and consumer choice is strongly influenced by temporal distance and sequence. Despite time’s ubiquity in consumer behavior, the scientific treatment of time is psychologically naïve. Consumer behavior research on time typically focuses on manipulation and measurement of objective time (minutes, days, weeks, months, and years), to the neglect of subjective time. Just as merely measuring and manipulating decibels and luminos provides an impoverished understanding of people’s judgments and decisions about loudness and brightness, respectively, merely measuring and manipulating objective time provides an impoverished understanding of consumers’ judgments and decisions about time. The three papers in this symposium seek a more psychologically sophisticated understanding of the role of time’s subjective, personal influence on consumer behavior.

First, Mogilner and Aaker highlight the personal value of time (vs. money) for consumers. They find that because consumers’ expenditure of time carries a great deal of personal meaning, merely activating the construct of time (vs. money) boosts consumers’ feelings of personal connection with the product and, in turn, their attitudes toward the product.

The next two papers examine subjective temporal distance as an output—rather than an input, as is typically the case—of emotional experience, demonstrating that subjective distance is imperfectly correlated with and can vary independently of objective time. Kim and Zauberman find that emotional arousal moderates the subjective distance between now and later. They find that individuals’ preference for a lesser item now over a greater item later is partly caused by immediate emotions expanding perceptions of the temporal distance between now and later, in addition to the standard explanation that immediate emotions increase the value of immediate items.

Van Boven and colleagues argue that psychological distance generally, and temporal psychological distance in particular, is emotional in nature. They demonstrate that people report less psychological distance to events about which they feel more rather than less intense emotions, holding objective distance constant. This negative correlation between emotional experience and psychological distance is significantly reduced when people are given an alternative interpretation of their immediate emotions.

Finally, John Lynch leads a discussion of these findings and their relation to the scientific understanding of time as a psychological (rather than a purely objective) construct in consumer behavior.

EXTENDED ABSTRACTS

“Life’s Riches: The ‘Time>Money Effect’”
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As the most important resources consumers have at their disposal, references to time and money are pervasive in the consumer landscape. Consider, for example, the marketing campaigns of two brands of beer: Guinness’s “It’s worth the wait” 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 very different magazines (Money, New Yorker, Cosmo, 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 integrate these constructs into 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 experiments both in the field and in the laboratory. The results converge to reveal a robust “time>money effect.” Compared to activating money, activating time, in general, leads to more favorable product attitudes. This “time>money effect” appears to be driven by a differential focus on one’s experience gained from using the product versus the value gained from merely owning the product. Whereas thinking about time fosters feelings of personal connection as consumers consider their experiences garnered with the product (Reed, Acquino, & Levy, 2007; Van Boven & Gilovich, 2003), thinking about money disconnects consumers from those same products they know and use (Vohs, Mead, & Goode, 2006). As a result, directing attention to time (rather than money) apparently helps consumers extract greater happiness from the products filling their lives.

Across four experiments, we found support for our hypothesis that activating time (vs. money) leads to more favorable product attitudes. And further, this “time>money effect” is driven by the distinct mindsets that each activates, with the temporal (vs. monetary) mindset evoking greater feelings of personal connection.

In experiment 1, student participants were first asked to report either the amount of time they spent on their iPod or the amount of money they spent on their iPod. Those who were led to think about their time spent subsequently reported more positive attitudes towards the product than those led to think about their money spent. Further, this “time>money effect” was mediated by participants’ feelings of personal connection with their iPods.

Experiment 2 was conducted to examine whether the “time>money effect” is driven by increased feelings of personal connection with the product, or if a mere valence-based account could explain the results (e.g., differential attention to the monetary costs of purchasing the product versus the temporal benefits of consuming the product). Therefore, experiment 2 was conducted at an outdoor concert that was free of charge but for which some individuals spent extensive amounts of time waiting before the concert to ensure getting decent seats. Just prior to the start of the concert, participants were asked either how much time or how much money they spent in order to see the concert. The results revealed that even in instances where the expenditure of time represented a considerable cost, activating time led to more positive attitudes towards the product than activating money, and this effect was mediated by feelings of personal connection with the product.

Participants in experiment 3 were primed with either time or money using a sentence scramble task to determine whether the “time>money effect” occurs only when time and money are acti-
vated through an overt question, or whether it can also occur when the constructs are activated more subtly. Experiment 3 also offered further insight into the underlying process through a test of moderation. Specifically, if feelings of personal connection underlie the effect, we would expect it to be particularly strong for experiential purchases (those that “are made with the primary intention of acquiring a life experience”) compared to material purchases (those that “are made with the primary intention of acquiring a material good”; Van Boven & Gilovich 2003). Supporting our conceptualization that the activation of time (vs. money) boosts product attitudes by leading consumers to reflect on their purchase as part of their personal life experience, we found “the time>money effect” to be stronger for experiential purchases than material purchases.

Finally, in experiment 4, individuals were primed with either time or money using the same sentence scramble task as used in experiment 3 before entering a café. Upon leaving the café, those who had been primed with time reported more positive attitudes towards the café than those who had been primed with money, revealing that the “time>money effect” is strong enough to impact how individuals actually experience the products they consume.

Results showed that participants’ subjective estimates of time horizon were less sensitive to changes in objective time horizons after viewing ‘hot’ photos than after viewing ‘not hot’ photos. Such non-sensitivity to time horizons corresponds to a greater degree of present bias according to the time perception model of hyperbolic discounting (Zauberman, Kim, Malkoc, & Bettman 2008). Supporting this, when discount rates were calculated using objective time horizons, participants in the ‘hot’ condition showed more deviation from exponential discounting than those in ‘not hot’ condition. When participants’ subjective time estimates were accounted for (i.e., discount rates were calculated using subjective time estimates of objective time horizon instead of objective time horizon itself), however, discount rates in both conditions no longer decreased as a function of time delay. These results suggest that visceral factors impact perceived time horizon, and not just the valuation of the outcome itself. Moreover, these changes in time perception contribute to present-biased preferences when visceral factors are active.

Study 2 demonstrates the impact of concrete mental representation on time perception. Participants were randomly assigned to either a concrete representation or control condition. In the concrete representation condition, participants visualized the time when they would receive and spend a $75 cash prize. They were asked to imagine and describe the occasion as vividly as possible including where to go and with whom to spend the money. Participants in the control condition did not complete this task. Next, all participants indicated how long they felt the duration between today and a day in 1 month or 3 months to be. They also indicated the delay premium if they were to delay the use of the cash prize by 1 month or 3 months.

Results showed that participants’ subjective perception of time horizons were less sensitive to objective time horizons in the concrete mental representation condition than in the control condition. Participants in the concrete mental representation condition showed a greater level of present bias (i.e., decrease in discount rates over time) than those in the control condition when present bias was measured using objective time horizons. When subjective time perception was used, however, discount rates in both conditions were equal over time, supporting the time perception model of hyperbolic discounting. These results imply that concrete mental representation shifted participants’ sensitivity to time horizons, causing a greater level of present bias. There was also a marginally significant main effect of mental representation on discount rates calculated using subjective time estimates, implying that concrete mental representation changed participants’ valuation of outcomes as well.

In sum, this paper demonstrates an important way in which emotion and mental representation affect present-biased preference. We confirmed that affective and cognitive drivers influenced present bias (measured by declining discount rates), replicating the findings in past research. Importantly, these drivers changed individuals’ sensitivity to time horizons. Taken together, these results support and extend the time perception model of hyperbolic dis-

References

“Deconstructing the Present Bias: Linking Visceral Factors and Mental Representation through Time Perception”
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Research on intertemporal decisions has shown individuals have a present-bias: that is, their preference for earlier outcomes over later ones gets stronger as consumption comes closer in time (O’Donoghue and Rabin 1999). This preference is often modeled using a hyperbolic discount function: the rate at which an outcome is discounted over time (delay discounting) decreases as the time horizon gets longer. Several lines of research on intertemporal choice have suggested that visceral factors (e.g., sexual desire, hunger, or alcohol; Loewenstein 1996) or concrete mental representation (Malkoc and Zauberman 2006; Zauberman and Lynch 2005) increase the degree of present-bias. While these factors are shown to drive present-biased preferences, it is not clear whether they change individuals’ momentary valuation of outcomes or their sensitivity to time horizon (i.e., the duration of the delay).

Recently, in their time perception model of present bias, Zauberman, Kim, Malkoc, and Bettman (2008) showed that individuals discount the value of outcomes, as well as discount duration itself (e.g., non-linear time perception), and this combined effect results in hyperbolic discounting. In this paper, we investigate the link between affective and cognitive drivers of present bias and time perception. Specifically, we propose that some of the standard affective and cognitive drivers of the present bias operate, at least in part, through shifts in subjective time perception of the relevant time horizon such that individuals’ perceived time is more contracted or non-linear when these drivers are active.

Study 1 demonstrates the impact of sexual attractiveness on sensitivity to time horizons. Participants rated the attractiveness of 15 portrait photographs of the opposite sex, which were taken from a public website (http://www.hotornot.com). About half of the participants were presented with ‘hot’ photos that received mean ratings of 9.5 (out of 10) or higher on the website, and the other half were presented with ‘not hot’ photos that were rated as 5 or lower. After viewing and rating the attractiveness of each photo, all participants indicated subjective feeling of duration between today and multiple time horizons (e.g., 3 months to 36 months). Next, they indicated how much they would have to be paid to wait to receive a gift certificate for multiple time delays (e.g., 3 months to 36 months).

Results showed that participants’ subjective estimates of time horizon were less sensitive to changes in objective time horizons after viewing ‘hot’ photos than after viewing ‘not hot’ photos. Such non-sensitivity to time horizons corresponds to a greater degree of present bias according to the time perception model of hyperbolic discounting (Zauberman, Kim, Malkoc, & Bettman 2008). Supporting this, when discount rates were calculated using objective time horizons, participants in the ‘hot’ condition showed more deviation from exponential discounting than those in ‘not hot’ condition. When participants’ subjective time estimates were accounted for (i.e., discount rates were calculated using subjective time estimates of objective time horizon instead of objective time horizon itself), however, discount rates in both conditions no longer decreased as a function of time delay. These results suggest that visceral factors impact perceived time horizon, and not just the valuation of the outcome itself. Moreover, these changes in time perception contribute to present-biased preferences when visceral factors are active.

Study 2 demonstrates the impact of concrete mental representation on time perception. Participants were randomly assigned to either a concrete representation or control condition. In the concrete representation condition, participants visualized the time when they would receive and spend a $75 cash prize. They were asked to imagine and describe the occasion as vividly as possible including where to go and with whom to spend the money. Participants in the control condition did not complete this task. Next, all participants indicated how long they felt the duration between today and a day in 1 month or 3 months to be. They also indicated the delay premium if they were to delay the use of the cash prize by 1 month or 3 months.

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In sum, this paper demonstrates an important way in which emotion and mental representation affect present-biased preference. We confirmed that affective and cognitive drivers influenced present bias (measured by declining discount rates), replicating the findings in past research. Importantly, these drivers changed individuals’ sensitivity to time horizons. Taken together, these results support and extend the time perception model of hyperbolic dis-
counting (Zauberman, Kim, Malkoc, & Bettman 2008), showing that factors often assumed to operate through the valuation of outcomes, actually operate (at least in part) through changes in sensitivity to time horizons, leading to present-biased preferences.

References

“Feeling Close: The Emotional Nature of Psychological Distance”
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What can make an event psychologically close or distant? What can make high school graduation seem like “just yesterday” or “long ago”? What can make a conference presentation seem “just around the corner” or “ages away”?

Despite psychological distance’s importance to everyday experience and behavior (James 1890/1950; Lewin 1951), it is not clear what psychological distance actually is. This is because psychological distance tends to be operationally equated with objective distance (e.g., Trope & Liberman 2003). This paper seeks to clarify the psychological nature of psychological distance.

We hypothesize that psychological distance is largely emotional in nature: events about which people feel stronger emotions are less psychologically distant than events about which people feel weaker emotions. Because factors unrelated to events’ objective distance can influence how intensely people feel about those events, the same events can be more or less psychologically distant, independent of when they actually occur.

Psychological distance may be emotional in nature in part because emotional arousal typically signals events’ importance and relevance to the self (Frijda 1988; Lazarus 1991; Neese 1990). Increases in emotional arousal are closely related to decreases in objective distance (Olson 1988; Savitsky, Medvec, Charlton, & Gilovich 1998). This naturally occurring inverse relationship between emotionality and objective distance may produce a subjective inverse association between emotionality and psychological distance that may become overgeneralized such that events of equal objective distance can be psychologically closer when people feel relatively intensely about those events.

Our analysis of the emotional nature of psychological distance yields the novel prediction that inducing people to feel more strongly about an event will reduce that event’s psychological distance, holding constant the event’s objective distance. We tested this prediction in four experiments.

In experiment 1, people were asked to describe, either emotionally or dispassionately, positive or negative future events. People reported being psychologically closer (i.e., less distant) to emotionally (rather than dispassionately) described events. People also reported positive events to be more psychologically distant than negative events, probably because positive events are less emotionally evocative than negative events (e.g., Rozin & Royzman 2001).

In experiment 2, we sought to test whether emotional intensity would reduce psychological distance to both past and future events. Participants described either their last or next dentist visit. After estimating the number of days since or until their dentist visit, participants were asked to describe the visit, depending on random assignment, either emotionally or dispassionately. As predicted, people reported that emotionally regarded dentist visits were psychologically closer than dispassionately regarded dentist visits, independent of those events’ tense (past or future) and of the number of days since or until the visit.

In experiment 3, we sought to manipulate whether people felt more or less intensely about a future event indirectly through assignment to social roles. Such an indirect manipulation helps avoid potential concern that explicit instructions to regard events more or less emotionally, as in experiments 1 and 2, elicit experimental demand or some other aspect unrelated to emotionality. People were randomly assigned either to engage in an embarrassing public performance—dancing to the Devo song, “Whip it”—or to evaluate others’ performance. Dancers reported more emotional arousal than evaluators. As predicted, dancers also reported that the dancing was psychologically closer than did evaluators. In addition, the effect of being a dancer or evaluator on reported emotional intensity statistically mediated the effect of being a dancer or evaluator on psychological distance.

In experiment 4, we sought more direct evidence for the emotional nature of psychological distance, which implies that emotional intensity should reduce psychological distance to the degree that experienced emotions are attributed to emotional events, but not when experienced emotions are attributed to some other event. The negative correlation between emotional intensity and psychological distance should therefore be reduced if people are led to attribute their emotional experience to some other event other than the target emotional event.

Participants were told that in 15 minutes they would dance to the Devo song “Whip It” for one minute in front of the experimenter and a video camera, and that their performance would be shown later to other students in a study of impression formation. During the wait, participants were asked to complete an unrelated “marketing” study concerning product evaluation and auditory stimuli. Participants donned a pair of headphones and listened to “New Age” whale songs while completing questionnaires. Depending on random assignment, participants were either told that the songs “did not influence cognitive performance” (control condition), or that the songs might make them feel “anxiety and fear” (misattribution condition).

Consistent with the emotional nature of psychological distance, the correlation between emotional intensity and psychological distance was more strongly negative in the control condition than in the misattribution condition. People’s emotional intensity is associated with reduced psychological distance, but not when people attribute their emotions to an unrelated source. This finding indicates that emotional intensity does not reduce psychological distance of all future events, but only those events to which people attribute their emotions.
In conclusion, although psychological distance has conceptual prominence in behavioral science, the extant theoretical and empirical emphasis has been on objective temporal distance (minutes, days, weeks, months, and years) as an input to thinking, feeling, and behaving. Our studies shift focus to the subjective (rather than the objective) nature of psychological distance as an output (rather than an input) of emotion. Independent of objective distance, emotional intensity reduces events’ psychological distance. Our findings highlight the importance of putting the “psychological” back in psychological distance.

References