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The self-control literature is premised on the notion of myopia (short-sightedness or present-biased preferences) and assumes that choosing vices generates regret. An alternative perspective suggests that consumers often suffer from a reverse self-control problem—namely, excessive farsightedness and overcontrol, or “hyperopia.” This research examines whether consumers can foresee the detrimental long-term consequences of hyperopia. Five studies demonstrate that anticipating long-term regret relaxes self-control and motivates consumers to counteract their righteousness. Consumers are more likely to select indulgences and luxuries when they judge the longer-term regrets of others, anticipate their own regret in the distant future, and reflect on their regret regarding an actual decision made in the more distant past. The article concludes with two field experiments that examine the effect of anticipatory regret on real consumer purchases at a shopping mall and during Thanksgiving. These experiments demonstrate that anticipating long-term regret leads consumers to buy pleasurable products rather than practical necessities and to spend more on shopping. The implications for marketers and consumers are discussed.

*Keywords:* hyperopia, self-control, regret, consumer behavior

## Remedying Hyperopia: The Effects of Self-Control Regret on Consumer Behavior

Yield to temptation. It may not pass your way again.  
—Robert A. Heinlein

Many purchase and consumption decisions involve an intrapersonal struggle between consumers' righteous, prudent side and their indulgent, pleasure-seeking side. Whereas purchasing and consuming utilitarian necessities and virtues (e.g., a practical car, a healthful food item) is considered responsible and farsighted, yielding to hedonic temptations (e.g., buying a luxury car, eating a chocolate cake) is viewed as impulsive and wasteful. The perceived precedence of virtue and necessity over vice and luxury is at least as old as ancient Greek civilization. (Plato and Aris-

totle argue that reason ought to rule appetitive and passionate elements.) Similarly, consumer self-control research emphasizes the importance of exercising willpower and controlling desires (e.g., Hoch and Loewenstein 1991; Prelec and Herrnstein 1992). Much of this research has been premised on the notion that the purchase and consumption of vices generates regret (e.g., Baumeister 2002; Read, Loewenstein, and Kalyanaraman 1999). According to this perspective, consumers are better off in the long run if they choose virtue over vice, work over leisure, and utilitarian necessities over hedonic luxuries.

However, recent research challenges this approach and suggests that consumers often suffer from a reverse self-control problem—namely, excessive farsightedness and overcontrol, or “hyperopia” (Kivetz and Keinan 2006; Kivetz and Simonson 2002). Hyperopic consumers over-emphasize virtue and necessity at the expense of indulgence and luxury. Kivetz and Simonson (2002) suggest that consumers who recognize their tendency to avoid temptations and focus on doing “the right thing” precommit to indulgences to ensure that the goal of having more fun and luxury is realized. Furthermore, Kivetz and Keinan (2006) demonstrate that though in the short-term it appears preferable to act responsibly and choose virtue over vice, over

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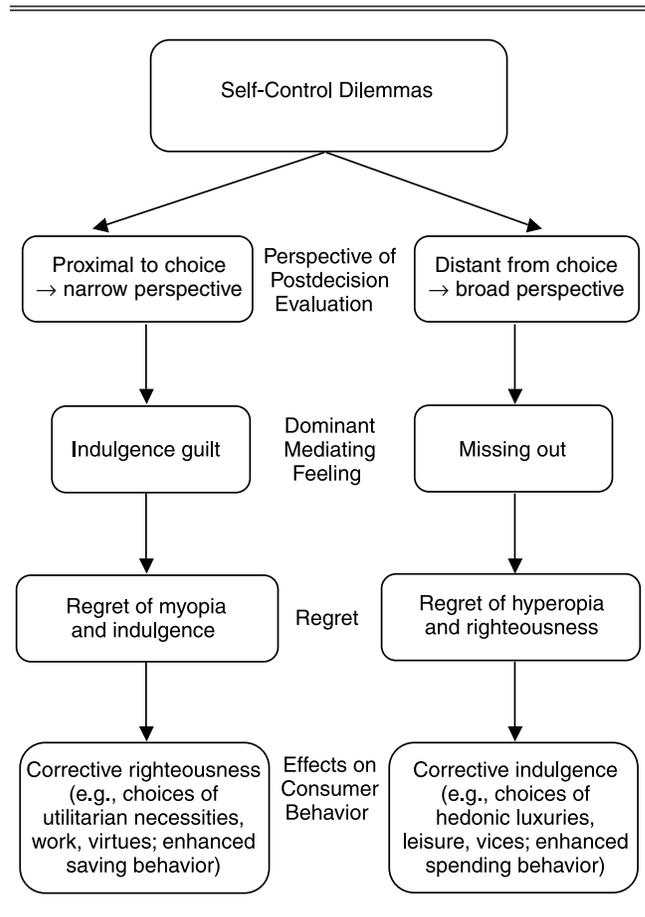
time such righteous behavior generates increasing regret. They argue that the passage of time attenuates regret about choosing vice and accentuates regret about choosing virtue because of the decay of indulgence guilt and the intensification of feelings of missing out on the pleasures of life.

The current research builds on the notion of hyperopia and examines whether consumers can foresee that such prudent behavior will evoke increasing regret. More important, we demonstrate that anticipating long-term regret can influence preference and motivate consumers to counteract their righteous tendencies and behaviors. We examine the effect of anticipatory regret on real choices and actual buying behavior using different methodologies, samples, and self-control dilemmas. The studies demonstrate that whereas short-term regret impels consumers to select virtues and purchase necessities, long-term regret drives consumers to choose vices, purchase indulgent products, and spend more money when shopping.

Our findings are particularly important in view of the frequent use of anticipatory regret in advertising campaigns (e.g., state lotteries, V8, AT&T, Kodak) and the growing interest in the behavioral consequences of consumer regret (see Cooke, Meyvis, and Schwartz 2001; Simonson 1992; Tsiros and Mittal 2000). Whereas prior consumer research has focused on imaginary regrets and hypothetical decisions, the current research demonstrates the effects of both anticipated and real regrets on real consumer choices and actual purchases in the marketplace. Furthermore, prior consumer research has examined the impact of anticipatory regret on immediate preferences and choices. That is, previous studies have emphasized the possibility of regret during consumers' decision processes. Because consumers do not typically make purchase decisions immediately after exposure to a marketing communication (e.g., an advertisement), we conduct two field experiments to examine whether anticipatory regret can affect real purchase decisions that occur a few hours and even a few days after the regret manipulation.

We report a series of five studies that test our conceptual framework. We first present three studies that demonstrate the effect of self-control regrets on immediate preferences and choices. In these studies, choices of indulgence increase when participants judge the long-term rather than short-term regrets of others (Study 1), anticipate their own regret in the distant future rather than the near future (Study 2), or reflect on their regret regarding an actual decision they made in the distant past rather than the recent past (Study 3). We conclude with two field experiments that examine the effects of anticipated self-control regrets on consumers' real purchases at a shopping mall (Study 4) and during the Thanksgiving holiday (Study 5). Combined, the five studies demonstrate that when consumers consider long-term regrets, they are more likely to anticipate regrets of righteous decisions and consequently correct their prudent behavior by indulging and splurging on pleasurable products. The studies also include process measures and examine consumers' mind-sets and feelings of guilt and missing out under narrow, broad, and spontaneous temporal perspectives. In addition to testing our conceptualization, the reported experiments examine alternative explanations, involving factors such as errors of commission versus omission (action versus inactions) and conversational norms. Figure 1 presents an outline of our conceptual framework.

Figure 1  
THE EFFECTS OF SELF-CONTROL REGRET ON CONSUMER BEHAVIOR: A CONCEPTUAL FRAMEWORK



We begin by reviewing recent research on self-control regret.

### SELF-CONTROL REGRETS

The assumption that people regret indulging is fundamental to most theories of self-control (e.g., Ainslie 1975; Baumeister 2002; Schelling 1984). Nevertheless, there is a dearth of empirical research on self-control regret and its behavioral consequences. The few studies that have addressed this issue have focused on regrets of catastrophic myopia and temptation and have demonstrated that anticipatory regret leads people to behave more responsibly (Bakker, Buunk, and Manstead 1997; Parker, Stradling, and Manstead 1996; Richard, Van der Pligt, and De Vries 1996).

Contrary to the prevalent myopic premise, Kivetz and Keinan (2006) argue that overcontrol and excessive farsightedness (hyperopia) can also lead to regret. They examine regrets of past self-control choices and demonstrate that though yielding to temptation generates regret in the short run, righteous choices of virtue and necessities lead to stronger regret in the long run. They explain this finding on the basis of the notion that a broader temporal perspective enables consumers to escape the influence of "indulgence guilt" and recognize their tendency to miss out on hedonic experiences. Accordingly, they show that the intensifying

regret about hyperopia is mediated by the decay of guilt and the persistence of feelings of missing out on the pleasures of life.

In one of their studies, Kivetz and Keinan (2006) explore the regrets experienced by college students about a recent or distant winter break and by alumni reflecting on their college winter breaks from 40 years ago. They find that regrets about not indulging over the winter break increase with time, but regrets about not working, not studying, and not saving decrease with time. The studies also provide converging evidence that the underlying psychological mechanism involves a temporal variation in the intensity of "hot," intense emotions of guilt versus "cold," wistful feelings of missing out (Kahneman 1995). A key test demonstrates that whereas priming affective processing of a self-control dilemma yields the predicted reversals in regret, guilt, and missing out, priming cognitive processing attenuates such reversals.

The current research examines whether consumers can foresee that selecting virtue over vice (e.g., work over pleasure) will generate increasing regret over time. We hypothesize that consumers' default mind-set is narrow and does not spontaneously incorporate long-term regret, which leads to the common misprediction that indulgence and vice generate more regret than prudence and virtue. However, we also hypothesize that consumers who are prompted to consider how they or others would feel about their choices in the long run will anticipate regretting prudence and righteousness more than pleasure and indulgence. Such anticipated regret may have important behavioral consequences, as we discuss in the next section.

In addition to testing our conceptualization, the reported experiments examine alternative explanations, including the distinction between errors of commission and omission (actions versus inactions). Gilovich and Medvec (1995) demonstrate that actions (errors of commission) evoke more regret in the short run, but inactions (errors of omission) generate more regret in the long run. This alternative explanation predicts that both "hedonic" and "virtuous" inaction regrets should increase over time because both are related to errors of omission. However, regardless of whether virtue or vice options are framed as actions or inactions, we consistently find that vices are regretted in the short run and virtues are regretted in the long run. In the "General Discussion" section, we describe several other measures that we employed to ensure that the self-control dilemmas we studied did not confound actions and inactions.

#### CONSEQUENCES OF SELF-CONTROL REGRET FOR CONSUMER CHOICE

An intriguing question that has important implications for both consumers and marketers is whether the anticipation of self-control regret can affect immediate and delayed purchase behavior. In particular, would evaluating distant-past decisions or anticipating distant-future regret increase the tendency to indulge?

Prior research has demonstrated that consumer choice can be systematically influenced by anticipatory regret (e.g., Greenleaf 2004; Hetts et al. 2000; Simonson 1992). In an influential article, Simonson (1992) demonstrates that simply asking consumers to anticipate their regret made them more likely to purchase a currently available item on

sale rather than wait for a better sale and also made them more likely to prefer a higher-priced, well-known brand over a less expensive, lesser-known brand. In the context of self-control, several studies have shown that the anticipation of regret may reduce the tendency to engage in risky behaviors. Parker, Stradling, and Manstead (1996) show that anticipated regret modified drivers' beliefs about and attitudes toward unsafe driving. Similarly, Bakker, Buunk, and Manstead (1997) and Richard, Van der Pligt, and De Varies (1996; see also Richard, De Varies, and Van der Pligt 1998) demonstrate that people who were asked to anticipate the regret associated with engaging in unsafe sex were subsequently more likely to use contraceptives. Indeed, despite the dearth of empirical research on self-control regret, a basic assumption underlying extant theories of self-control is that the anticipated regret of future lapses of control motivates the use of various precommitment devices (Ainslie 1975; Schelling 1984).

Similar to the manner in which anticipating regrettable myopia leads to attempts to correct or prevent such behavior, we propose that regrets associated with overcontrol (hyperopia) will relax self-control efforts. Because selecting virtue over vice is more likely to evoke remorse when evaluated in a broader temporal perspective, we expect that anticipating long-term (compared with short-term) regret will increase consumers' tendency to indulge, purchase luxuries, and spend money. Furthermore, consistent with the notion that consumers' default mind-set is narrow, we predict that long-term regret will also increase choices of indulgence relative to situations in which consumers do not consider regret or anticipate regret at an unspecified future time.

We test the effect of self-control regret on choice using three methodologies. In Study 1, we ask consumers to judge the regrets of others regarding a past decision and then make the same choice for themselves. In Study 2, we examine the effect of asking participants to anticipate their own future regret about a real impending choice. In both studies, we vary the temporal separation between the (past or current) choice and its subsequent evaluation; we also include a no-regret control condition. Using a process measure, these studies also enable us to explore the different mind-sets induced by narrow versus broad perspectives. We propose that a more global perspective enables consumers to recognize the accumulation of missed opportunities to enjoy life and create special memories. Accordingly, we expect respondents to refer explicitly to such considerations when asked to explain their long-term (but not short-term) regrets. In Study 3, we examine the consequences of self-control regret for real choices that are (seemingly) unrelated to the past decision being regretted.

#### *Study 1: The Effects of Judging Others' Regret on Personal Choice*

*Method.* Ninety-one respondents (train station travelers) were randomly assigned to one of three conditions: (1) a near-past choice condition (i.e., two hypothetical people were described as making choices yesterday), (2) a distant-past choice condition (i.e., the same two people were described as making the identical choices 20 years ago), or (3) a no-regret control condition (i.e., no people or past choices were described). In the first two (regret) conditions, a self-control dilemma was presented in which one of the

described people chose the more pleasurable, indulgent option (i.e., going on vacation) and the second person chose the more righteous option (i.e., working and receiving extra income).

Respondents assigned to either of the first two (regret) conditions were asked to indicate which person currently felt greater regret about the past decision. They were then asked to explain their regret judgment in writing. Finally, these respondents were asked to indicate what they would choose if they personally had to make the same choice (between vacationing and working) in the present. Respondents assigned to the control condition did not read about any people and were not asked to judge past regret. These respondents simply chose for themselves between vacationing and working (and receiving extra income) in the present.

*Results.* A greater temporal perspective led to significantly more respondents indicating that the person who had chosen work would feel greater regret than the person who had chosen vacation (72% [23/32] versus 43% [13/30] in the distant-past versus near-past condition, respectively;  $z = 2.4, p = .01$ ). To gain more insight into the mind-set underlying the observed reversal in self-control regrets, we examined respondents' explanations of their regret judgments in the two temporal perspective conditions. We sorted explanations according to whether they explicitly included the following words: "life," "enjoy," "fun," "memory/ies," "memorable," "remember," "special," and "experiences." When regrets about near-past choices were explained, only 10% (3/30) of respondents' explanations included such words, compared with 53% (17/32) when distant-past choices were evaluated ( $z = 4.2, p < .001$ ). To illustrate, the following explanations (obtained in the distant-past condition) contained terms related to enjoying life and creating memories: "A vacation may be a memory for your entire life," "life is not all about making money," and "vacations are a special time and can never be recovered." In contrast, explicit references to being financially responsible were significantly more prevalent under a narrow temporal perspective. When regrets about near-past choices were explained, 37% (11/30) of respondents' explanations included such considerations, compared with only 9% (3/32) when distant-past choices were evaluated ( $z = 2.8, p < .005$ ). Examples of such explanations included "work comes before play;... it would be too much money to pass up"; "[better to] get together with friends on another day and get the extra pay"; and "money always comes in handy." Overall, this analysis supports the assertion that a broader temporal perspective helps consumers recognize the risk of chronically missing out on hedonic experiences and, more generally, motivates them to consider "what life is all about."

The results also support the hypothesis that considering long-term regret (rather than short-term regret or no regret) would enhance the preference for indulgence. In particular, respondents who judged the regret of a distant- rather than a near-past decision were significantly more likely to select vacation over work when making a current choice for themselves (63% [20/32] versus 40% [12/30], respectively;  $z = 1.8, p < .05$ ). Furthermore, as we predicted, respondents who judged the regret of a distant-past decision were significantly more likely to select vacation than control

respondents who did not judge regret (63% versus 38% [11/29], respectively;  $z = 2.0, p < .05$ ).

A drawback of Study 1 is that it examined decisions that respondents did not actually make and choices that were hypothetical. Although the findings were consistent with our analysis, it is not clear that regret would actually influence consumer preferences when the relevant choice is real. Therefore, in the subsequent studies, we investigate the impact of self-control regret on preference by using actual regrets and real choices.

### *Study 2: The Effect of Anticipatory Regret on Real Choices*

In this study, we examine the effect of anticipating regret about an impending, real self-control dilemma on the way this dilemma is resolved. To test the hypothesis that a broader perspective enhances choices of indulgence, we ask participants to anticipate their regret in either the near or the distant future. We also include two control conditions in which participants make real choices either after they anticipate their regret at an unspecified future time or without first anticipating their regret at all. We expect greater regret about choosing virtue over indulgence when the prospective evaluation is delayed than when it is proximal or when its timing is unspecified. Accordingly, we predict that respondents who anticipate their distant-future regret will select more indulgence than respondents who (1) anticipate their near-future regret, (2) anticipate their regret at an unspecified future time, or (3) do not anticipate regret.

*Method.* Participants (122 students at a large East Coast university) were randomly assigned to one of four conditions: (1) a distant-future anticipated-regret condition, (2) a near-future anticipated-regret condition, (3) an unspecified-future-time anticipated-regret condition (i.e., the timing of the prospective evaluation was not mentioned), or (4) a no-regret control condition. Participants in all four conditions were informed that the research was about how people can make better choices. They were then offered a real choice between two lottery prizes and were told that the actual lottery drawing would take place on the evening of the same day. Participants were instructed to tear off the bottom half of the lottery form and to keep it as a receipt. This lottery receipt included a number and a Web site address where participants could subsequently check whether they had won.

The two prizes, representing a utilitarian necessity (i.e., a relative virtue) and an item of indulgence, were, respectively, (1) "a \$30 voucher toward free purchases at [a local chain of] drug stores" (valid for one year) and (2) "a one-year subscription to [a popular weekly guide to local nightlife and entertainment]." The description of the utilitarian prize depicted the logo of the drug chain, and the description of the indulgence prize depicted two recent covers of the magazine and the statement "indulge in [local city] with this fun weekly guide to nightlife, entertainment, dining, and the hottest events in the city."

Before selecting their prize, participants in the three anticipated-regret conditions were asked to predict which choice would cause them greater regret when evaluated in ten years (Condition 1), one day (Condition 2), or sometime (Condition 3) in the future. Participants rated their anticipated regret on a seven-point scale; higher (lower) ratings represented greater anticipated regret for choosing the

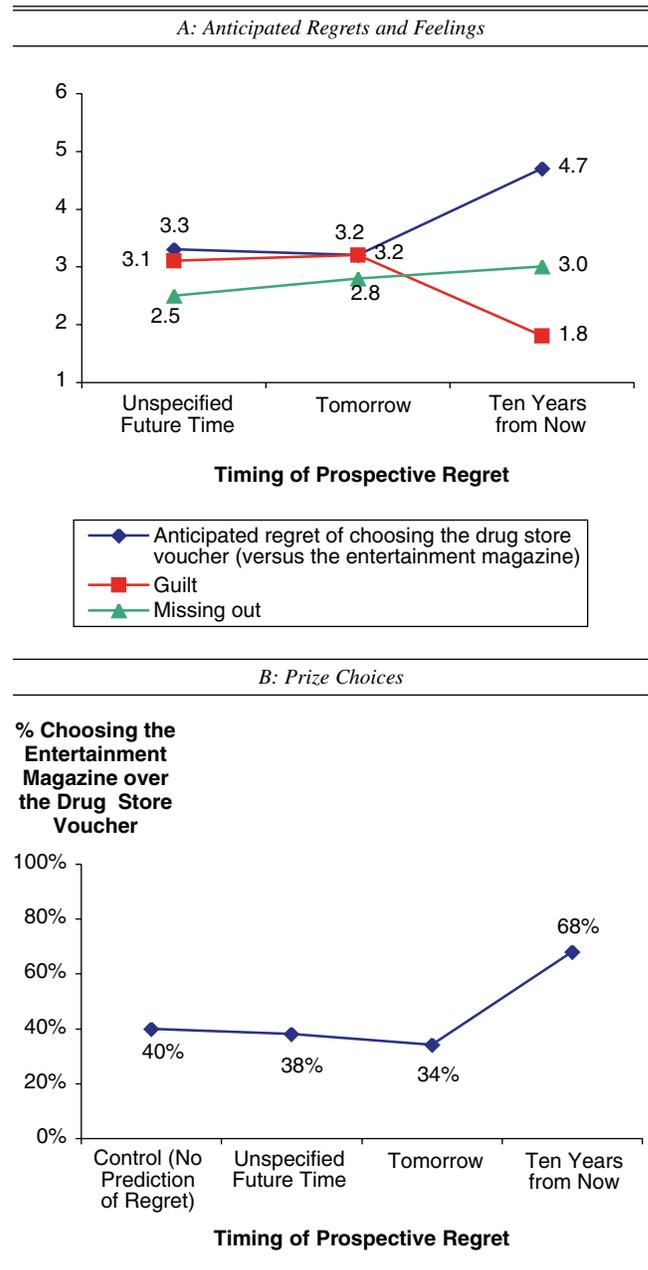
utilitarian (indulgence) prize. Then, after choosing the prize they wanted to receive if they won (and keeping the bottom half of the lottery form as their receipt), these participants were asked to explain their regret judgment in writing. Next, they were asked to imagine that they had just chosen the entertainment magazine subscription and were asked to rate how much feelings of guilt they thought they would experience when they evaluate their decision ten years (Condition 1), one day (Condition 2), or sometime (Condition 3) in the future. These guilt ratings were made on a seven-point scale ranging from “no feelings of guilt at all” (1) to “very strong feelings of guilt” (7). Participants were then asked to imagine that they had just chosen the drug store subscription and were asked to rate (using a similar seven-point scale) how much feelings of missing out they thought they would experience when they evaluate their decision at a future time (corresponding to the time frame of each condition).

Participants assigned to the no-regret control condition (Condition 4) were not asked to anticipate their future regret. These participants were simply asked to make a choice for themselves between the drug store voucher and the entertainment magazine. Finally, before participants in all four conditions were debriefed and thanked, they were probed for suspicion and asked to indicate what they thought was the purpose of the study. None suspected that the study was related to different temporal perspectives or articulated the hypotheses being tested.

**Results.** As Figure 2, Panel A, shows, greater temporal perspective led to a significant increase in the anticipated regret of choosing the drug store voucher compared with the anticipated regret of choosing the entertainment magazine (4.7 versus 3.2 in the distant-future versus near-future anticipated-regret condition, respectively;  $t = 3.0, p < .005$ ). Furthermore, as we predicted, the (relative) anticipated regret of choosing the drug store voucher was weaker for participants who predicted their regret at an unspecified future time than in the distant future (3.3 versus 4.7;  $t = 2.7, p < .005$ ). Similar to Study 1, there was an equivalence in the anticipated regrets of participants in the near- and unspecified-future conditions.

An examination of participants' explanations of their anticipated regret revealed that references to such considerations as enjoying life and creating special memories were significantly more prevalent under a broader temporal perspective (explanations were coded according to the scheme used in Study 1). When participants anticipated their distant-future regret, 48% (15/31) of the explanations explicitly mentioned such considerations, compared with 6% (2/32) and 7% (2/29) when near-future and unspecified-future regrets were anticipated, respectively ( $z = 4.2$  and  $4.1, ps < .001$ ). Examples of such explanations include “[the magazine] can lead to great experiences;... it is memories of trips to great museums or great concerts that make life better” and “[the magazine] provides me with info on what I can do in the city, making it more likely for me to go out and enjoy myself.... I will look back on it with good memories from all the outings I'm probably going to have.” Examination of participants' explanations also indicated that references to frugality and “smart shopper feelings” (Schindler 1998) were more prevalent under a narrow temporal perspective. When participants anticipated their

Figure 2  
ANTICIPATED REGRETS AND THEIR IMPACT ON REAL CHOICES: STUDY 2 RESULTS



distant-future regret, only 16% (5/31) of the explanations explicitly mentioned such considerations, compared with 38% (12/32) and 41% (12/29) when near-future and unspecified-future regrets were anticipated, respectively ( $z = 2.0$  and  $2.2, ps < .05$ ). Examples of such explanations include “I was thinking in terms of practicality and opportunity cost” and “I will use the drug store money productively.”

The analysis of participants' explanations supports the notion that a broader perspective highlights the importance of accumulating pleasurable and memorable experiences over life. Broader perspective also alleviates concerns about being responsible and frugal. Furthermore, the finding that

the explanations of participants in the unspecified-future condition were similar to those of participants in the near-future condition suggests that consumers' default mind-set is rather narrow.

The guilt and missing-out ratings of participants in Conditions 1–3 support our conceptual model (see Figure 2, Panel A). In particular, the anticipated guilt due to a current choice of the entertainment magazine was significantly lower in the distant-future condition than in either the near-future or the unspecified-future condition (1.8 versus 3.2 and 3.1, respectively;  $t = 3.4$  and  $2.7$ ,  $ps < .01$ ). In contrast, the anticipated feelings of missing out due to a current choice of the drug store voucher were directionally higher in the distant-future condition than in either the near-future or the unspecified-future condition (3.0 versus 2.8 and 2.5, respectively). To test whether such feelings mediated the effect of time perspective on regret, we created a measure of self-control affect (by subtracting participants' missing-out rating from their guilt rating). Consistent with our conceptualization, the Sobel (1982) test indicates that the self-control affect significantly mediated the impact of temporal perspective on anticipated regret ( $t = 2.1$ ,  $p < .05$ ).

Consistent with our predictions, the timing of the prospective regret had a significant effect on participants' real lottery choices. As Figure 2, Panel B, illustrates, 68% (21/31) of participants who anticipated their regret in the distant future chose the entertainment magazine over the drug store voucher, compared with only 34% (11/32) who anticipated their regret in the near future and 38% (11/29) who anticipated their regret at an unspecified future time ( $z = 2.8$  and  $2.4$ ,  $ps < .01$ ). Furthermore, as we predicted, the choices of (control) participants who did not predict future regret mirrored the choices of those who anticipated either near-future or unspecified-future regret. Specifically, only 40% (12/30) of control participants chose the magazine, which is significantly lower than in the distant-future anticipated-regret condition ( $z = 2.3$ ,  $p = .01$ ). Thus, as we predicted, anticipating longer-term regret enhanced the tendency to indulge compared with all other conditions.

### *Study 3: The Effects of Regretting Past Self-Control Decisions on Unrelated Real Choices*

The previous two studies tested the impact of regretting self-control choices on how consumers make the same choices. A question that arises is whether self-control regret can affect preference when the current choice is (supposedly) unrelated to the past decision being regretted. In addition to investigating this question, this study attempts to generalize the previous results by examining the effect of real (experienced) regret about actual past decisions. In contrast, Studies 1 and 2 explored the effects of judging the regret of others and anticipating the future regret of oneself, respectively.

Previous research has suggested that regretting the past can change present behavior and decisions. Lecci, Okun, and Karoly (1994) show that regret of the past is an important part of people's current goal system. They find that regrets represent a past desired goal state whose discrepancy with reality motivates change and corrective action. Indeed, considerable research has demonstrated that people regulate current goal functioning on the basis of feedback from previous performance (e.g., Carver and Scheier 1990).

Similarly, focusing cognitive attention on a past, unattained goal facilitates responsiveness to future, related goals, thus increasing the likelihood of subsequent goal attainment (Anderson 1983).

Building on these findings, we suggest that regretting past self-control decisions will motivate consumers to make corrective choices in the present, even when such choices are not directly related to the object of regret. That is, consumers are expected to counteract their perceived deficit or excess in past indulgence.

To test this prediction, we manipulate participants' regrets of actual past self-control choices. Participants are asked to think about a (near- or distant-) past self-control dilemma, in which they eventually chose either virtue or vice. They are expected to experience substantial regret when considering distant-past (but not near-past) hyperopia (choices of virtue over vice). Accordingly, we expect that reflecting on distant-past hyperopia will lead to a high share of choices of (unrelated) items of indulgence. Correspondingly, we expect participants to experience substantial regret when considering near-past (but not distant-past) choices of vice, and thus we predict that reflecting on recent pleasure will lead to a depressed share of choices of indulgence. We also include a control condition, in which participants consider regrets unrelated to self-control. We do not expect such regrets to activate any self-control-related goals; thus, this should lead to an intermediate tendency to choose indulgence that mirrors the choices of participants in the low-self-control regret conditions (i.e., near-past choices of virtue and distant-past choices of vice).

Study 3 also addresses the rival account of action versus inaction regrets. Whereas this alternative explanation predicts a main effect of temporal perspective, we predict an interaction between self-control action and temporal perspective. That is, we expect that a temporal perspective has a diametrically opposed effect on regrets of righteous actions compared with regrets of indulgent actions.

*Method.* Participants were 103 students in a large East Coast university. To manipulate regrets of actual past self-control choices, we randomly assigned participants to one of four treatment conditions in a 2 (temporal perspective: near versus distant past)  $\times$  2 (self-control decision: work/study versus pleasure) between-subjects design. As we describe subsequently, one-fifth of the participants were assigned to a control group. In all treatment conditions, participants were asked to think about a situation that occurred either last week or at least five years ago (near versus distant past, respectively) in which they had to choose between working (or studying) and doing something else they enjoyed more. To manipulate participants' resolutions of their past self-control dilemma, they were told to think about a situation in which they eventually chose either the work/study or the pleasure (manipulated between subjects). In all treatment conditions, participants were asked to describe in writing both the work/study and the pleasure alternatives and their chosen course of action.

Participants assigned to the control group were given similar instructions, but instead of thinking about a work/study versus pleasure decision, they were asked to consider a situation in which they chose between using a disposable product and a nondisposable product (i.e., a decision unrelated to self-control and indulgence). Similar to the treat-

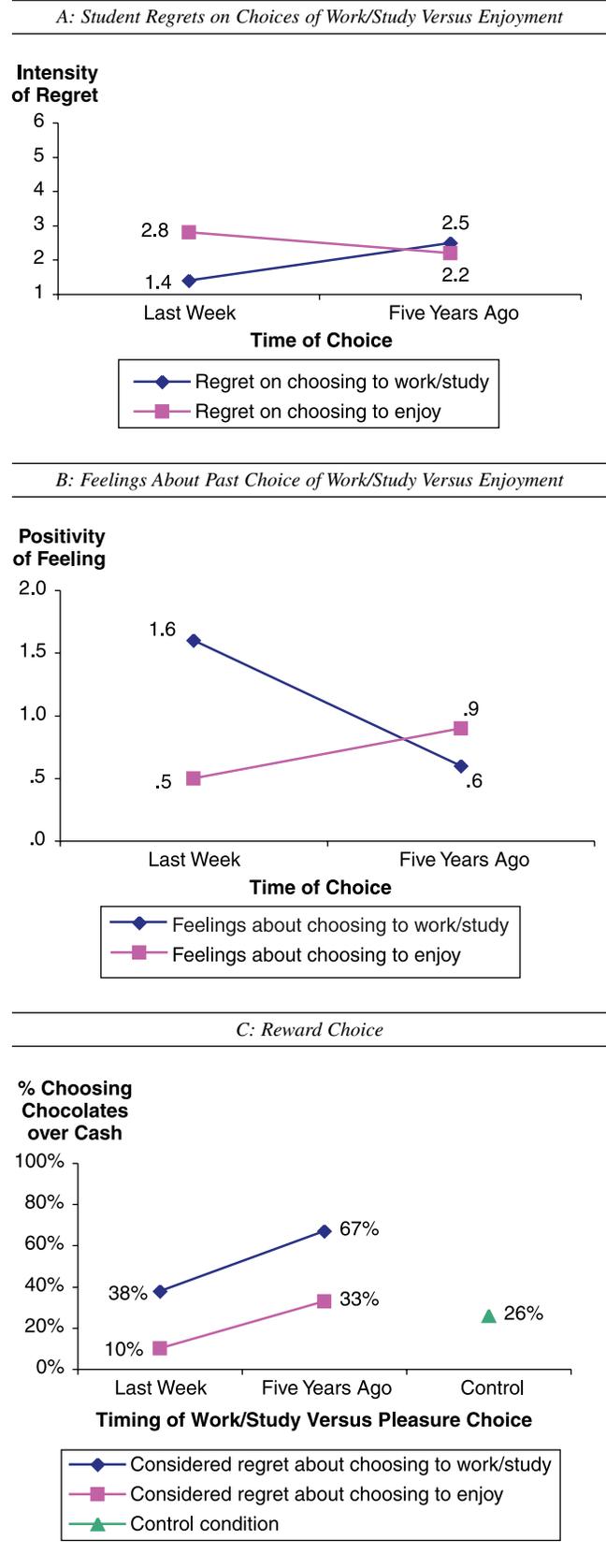
ment conditions, participants in the control group were randomly assigned to one of four subconditions in a 2 (temporal perspective: near versus distant past)  $\times$  2 (decision: disposable versus nondisposable product) between-subjects design. These participants were asked to describe in writing both the disposable and the nondisposable product alternatives and their chosen course of action.

Participants in all conditions (treatment and control) were asked to describe in writing how they felt at the present when thinking about their past choice. Next, they were asked to rate the extent to which they currently regretted their past choice. Ratings were made on a seven-point scale ranging from "no regret at all" (1) to "a lot of regret" (7). After completing the questionnaire, participants in all conditions received a "thank you" form. The form indicated that as a token of appreciation, participants could choose one of two rewards, which they would receive immediately. The two rewards were (1) \$5 in cash and (2) four Swiss chocolate truffles. The description of the vice reward included a color brochure of the chocolates and indicated that they were highly praised by gourmets. To verify that participants did not choose the chocolates as a gift for others, the description explicitly mentioned that a gift box was not available. After making their choice and receiving their reward, participants were probed for suspicion and asked to indicate what they thought was the purpose of the study. None suspected that the questionnaire was meant to influence their choice of reward or articulated the hypotheses being tested.

**Results.** Consistent with our conceptual model, the interaction between temporal perspective and self-control decision in determining the level of regret was significant and in the predicted direction ( $F(1, 76) = 6.0, p < .05$ ).<sup>1</sup> As Figure 3, Panel A, shows, for participants who chose work/study over pleasure, the regret experienced in the present was greater for those who considered a distant-past rather than a near-past self-control dilemma (2.5 versus 1.4;  $t = 2.6, p < .01$ ). Furthermore, for participants who chose pleasure over work/study, regret was directionally higher for those who considered a near-past rather than a distant-past decision (2.8 versus 2.2;  $t = 1.1, p < .15$ ). Thus, the temporal perspective of the postdecision evaluation had a diametrically opposed effect on the regret of righteousness compared with that of indulgence. Whereas participants who chose to work/study felt greater regret under a broad temporal perspective, participants who chose to enjoy themselves felt greater regret under a narrow perspective. Note that the observed interaction between self-control action and temporal perspective is inconsistent with the alternative explanation based on action versus inaction regrets (Gilovich and Medvec 1995). This rival account predicts that both regret of choosing work and regret of choosing pleasure should decrease over time because both relate to actions (errors of commission).

<sup>1</sup>As we expected, there was no interaction between perspective and choice of disposable versus nondisposable product in determining the regret of control participants (or their described feelings). Therefore, we do not elaborate on the regret and feeling measures in the control group, and we report the choice results pooled across the four control subconditions.

**Figure 3**  
CONSEQUENCES OF REGRETTING SELF-CONTROL  
DECISIONS FOR UNRELATED CHOICES: STUDY 3 RESULTS



Participants' current feelings about their past self-control choice were consistent with their experienced regret and supported the notion that virtue would be evaluated more favorably under a narrower *ex post* perspective, whereas indulgence would be evaluated more favorably under a broader perspective. Specifically, two independent judges, who were unaware of the hypotheses, rated participants' listed feelings according to their valence. Ratings were made on a five-point scale ranging from "very negative feeling" (-2) to "very positive feeling" (2). The interjudge reliability was 85%, and disagreements were resolved by averaging the ratings of the two judges.

Participants' feelings revealed a significant interaction between temporal perspective and self-control choice ( $F(1, 76) = 4.7, p < .05$ ). As Figure 3, Panel B, shows, participants who chose work/study felt significantly less positive about their decision when it took place in the distant rather than the near past (.6 versus 1.6;  $t = 2.5, p < .01$ ). In contrast, participants who chose pleasure felt directionally less positive when their decision occurred in the near rather than distant past (.5 versus .9;  $t = .8, p > .1$ ). Figure 3, Panel B, also suggests that whereas participants evaluating distal decisions felt worse about choosing virtue, participants considering recent decisions felt worse about choosing vice.

As we hypothesized, self-control regrets had a significant impact on (supposedly) unrelated choices of indulgence; a greater temporal perspective increased the likelihood of choosing the chocolate reward (49% [19/39] versus 24% [10/41];  $z = 2.3, p < .05$ ). Specifically, as Figure 3, Panel C, shows, participants who considered their regret about a past decision to work/study were significantly more likely to choose the chocolate reward when the evaluated decision occurred five years rather than a week ago (67% [12/18] versus 38% [8/21];  $z = 1.9, p < .05$ ). In addition, as we predicted, considering regret about a decision from last week to enjoy rather than to work led to a very low rate of chocolate choices (10% [2/20]), which was significantly lower than the corresponding rate (33% [7/21]) when the decision to enjoy occurred five years ago ( $z = 1.9, p < .05$ ). With regard to the reward choices of control participants, these were similar to the choices of participants in the low-regret conditions (i.e., evaluating near decisions to work and distant decisions to enjoy). In particular, 26% (6/23) of control participants chose the chocolate reward, which is significantly lower than participants who made distant decisions to work ( $z = 2.8, p < .005$ ) and marginally significantly higher than participants who made near decisions to enjoy ( $z = 1.4, p < .1$ ). Moreover, the results support the notion that self-control regret can activate a "balancing" goal (Dhar and Simonson 1999), such that perceived deprivation or excess of indulgence motivates counteractive choices. Specifically, participants who reflected on a decision to work rather than to enjoy themselves were more likely to choose the chocolate reward (51% [20/39] versus 22% [9/41];  $z = 2.9, p < .005$ ).

In summary, the results of Study 3 replicate the previous findings that greater temporal perspective increases regret of hyperopia and decreases regret of indulgence. More important, the results indicate that regret of past self-control decisions motivates consumers to make corrective choices in the present. Whereas short-term self-control

regrets impels consumers to select necessities, long-term regret drives consumers to choose more indulgence.

#### CONSEQUENCES OF SELF-CONTROL REGRET FOR REAL PURCHASE BEHAVIOR

Thus far, the studies have examined the effect of self-control regret on immediate preference and choice. However, in many real-world purchases, the consumer's decision is separated by hours or days from prior marketing communications. Therefore, to allow for a strong and realistic test of our conceptualization, we conducted two field experiments that examined whether anticipatory regret can affect delayed purchase decisions. We begin with the "shopping trip study," in which consumers were asked to anticipate their regret while riding a bus to a large shopping mall. We hypothesized that anticipating longer-term regret would increase purchases of pleasurable and indulgent products at the expense of more virtuous and practical necessities.

##### Study 4: The Shopping Trip Field Experiment

*Method.* Participants were 57 university employees and students who attended a shopping trip to a large shopping mall. The trip was organized by a university organization that provided a special bus from the university campus to the mall. During the bus ride, shoppers were asked to answer a five-minute questionnaire about shopping in return for a \$5 reward. Shoppers were randomly assigned to one of two temporal distance conditions. In both conditions, a shopping dilemma was described in which shoppers chose between two options: (1) indulging and buying an expensive clothing item that they really liked and would make them happy and (2) buying a cheaper clothing item that would serve the same purpose and be equally useful, which would allow them to save the price difference or use it for purchasing items they really needed. Shoppers were asked to predict which choice would cause them greater regret when evaluated ten years from now or tomorrow (distant-future versus near-future condition, respectively). They rated their anticipated regret on a seven-point scale; higher (lower) ratings represented greater anticipated regret for buying the cheaper (expensive) item. Participants were then asked to explain their regret judgment in writing. They were thanked and, when they reached the shopping mall, were allotted five hours of shopping.

On their way back from the mall, shoppers in both conditions were given a second questionnaire and were asked to list all the items they purchased at the mall. Shoppers did not know in advance that they would be asked to report their purchases. They were asked to rate each item they purchased with respect to whether it served primarily a practical, necessary purpose or a pleasurable, indulgent purpose. Ratings were made on a seven-point scale ranging from "practical" (1) to "pleasurable" (7). Shoppers were also asked to indicate why they purchased each item by circling one of the following two answers: "Because I need it," or "Because I want to have it (although I don't need it)." Finally, to check for demand characteristics, we probed shoppers for suspicion and asked them to indicate what they thought was the purpose of the research. None guessed that the research was related to different temporal perspectives or articulated the hypotheses being tested. Moreover,

none of the shoppers suspected that the first survey was intended to influence their purchases at the mall.

*Results.* As we expected, a greater temporal perspective led to a significant increase in the anticipated regret of buying the cheaper item compared with the anticipated regret of buying the expensive item (5.0 versus 3.8 in the distant-versus near-future anticipated-regret condition, respectively;  $t = 2.4, p < .01$ ). An examination of participants' explanations of their anticipated regret revealed that explicit references to considerations such as enjoying life and creating pleasurable memories were significantly more prevalent under a broader temporal perspective (we coded explanations according to the scheme described previously). When participants anticipated distant-future regret, 36% (10/28) of the explanations explicitly included such considerations, compared with 3% (1/29) when near-future regrets were anticipated ( $z = 3.3, p < .001$ ). For example, one participant in the distant-future condition wrote, "When I look back at my life,... I like remembering myself happy. So if it makes me happy, it's worth it." In contrast, mentions of frugality and smart-shopper feelings were significantly more prevalent under a narrow temporal perspective. When participants anticipated their distant-future regret, only 11% (3/28) of the explanations included such considerations, compared with 48% (14/29) when near-future regrets were anticipated ( $z = 3.4, p < .001$ ). Examples of such explanations include "I believe I can find a cheaper [clothing item]. What I need to do is go shopping again and again and compare all the stuff"; "I may buy the same item at other places with a lower price. I have to be more careful"; and "I am more concerned about if the item is a bargain (price versus functionality)." Overall, the analysis of participants' explanations supports the notion that a broader perspective highlights the importance of enjoying life and reduces concerns with being frugal and prudent.

As we hypothesized, the timing of the prospective regret had a significant effect on shoppers' actual subsequent purchases at the mall. Items purchased by participants in the long-term anticipated-regret condition were rated as more pleasurable and indulgent than items purchased by participants in the short-term anticipated-regret condition (3.6 versus 2.7;  $t = 3.2, p < .01$ ). Consistent with this finding, shoppers who were originally asked to anticipate their long-term regret indicated that more of their subsequent purchases were of "wanted" but "not needed" items (43% versus 26%;  $z = 2.4, p < .01$ ).

We went to great pains to verify that there would not be any demand characteristics. For example, we made sure that participants were not aware that there were different time perspective conditions, and we did not inform participants they would be asked to answer any additional survey or report their purchases at the mall. Although none of the participants articulated the hypotheses being tested, it might still be possible that shoppers' subjective perceptions and ratings of their own mall purchases were influenced by demand. To address this issue, we obtained objective evaluations of the purchased products. Specifically, we asked two independent judges (a woman and a man), who were unaware of the hypotheses, to rate the items listed by shoppers on a three-point scale ranging from "practical" (1) to "cannot determine whether the item is practical or pleasurable" (2) to "pleasurable" (3). The interjudge reliability

was 65%, and disagreements were resolved by discussion (the judges' ratings of the purchased products were positively correlated with participants' own ratings;  $r = .39, p < .001$ ). Consistent with our prediction, the two independent judges rated the shoppers' purchased items as more pleasurable in the distant- than the near-future regret condition (1.6 versus 1.3;  $t = 2.9, p < .01$ ). The judges' ratings also indicated that the relative share of pleasurable items (i.e., those receiving a rating of 3) to practical items (i.e., those receiving a rating of 1) was higher in the distant- than the near-future regret condition (22% versus 5%;  $z = 3.2, p < .001$ ).<sup>2</sup> Combined, the shoppers' own perceptions of their mall purchases and the independent judges' evaluations of these purchases show that anticipating longer-term regret enhanced the purchase of pleasurable but unnecessary items.

#### *Study 5: The Thanksgiving Holiday Shopping Experiment*

We designed Study 5 to generalize our findings in several important directions. First, the study examines whether anticipatory regret can affect purchase decisions that occur after a delay of several days (rather than hours). Research in applied psychology suggests that anticipating regret can indeed influence choices that are made even months later. For example, Richard, Van der Pligt, and De Vries (1996) show that respondents who were asked to anticipate the regret they would experience after engaging in unsafe sex reported less risky behavior in the five months following the study than a group of control respondents (for related results, see Bakker, Buunk, and Manstead 1997). However, prior consumer research has focused on the effect of anticipatory regret on immediate preferences. Because consumers do not typically make purchase decisions immediately after being exposed to a commercial or advertisement, it is important to examine whether anticipated regret can affect purchase decisions that occur after a substantial time delay. Second, in addition to examining the type of products consumers buy (vices or virtues), the study investigates the effect of anticipatory regret on the amount of money spent on shopping. Third, the study examines shopping on Thanksgiving weekend, an intriguing and important shopping phenomenon that has been underresearched. Wallendorf and Arnould (1991, p. 14) state that "despite being a major holiday, Thanksgiving Day, for the most part, has been ignored by social scientists and consumer researchers alike." Our experiment was conducted during the 2005 Thanksgiving weekend, when more than 60 million consumers shopped on Black Friday and spent \$27.8 billion during the three days after Thanksgiving (Holecek 2006). Finally, the study also examines the regret anticipated for an unspecified future time. In line with the notion that consumers' default mind-set is narrow and consistent with the findings of the previous studies, we expect the regrets and choices of consumers predicting their regret at an unspecified future time to mirror the regrets and choices of consumers anticipating short-term regrets.

*Method.* Seventy-four participants (university students recruited at a behavioral research lab) were randomly assigned to one of three conditions: (1) a distant-future

<sup>2</sup>The judges rated 20% of the items as a 2 ("cannot determine whether the item is practical or pleasurable").

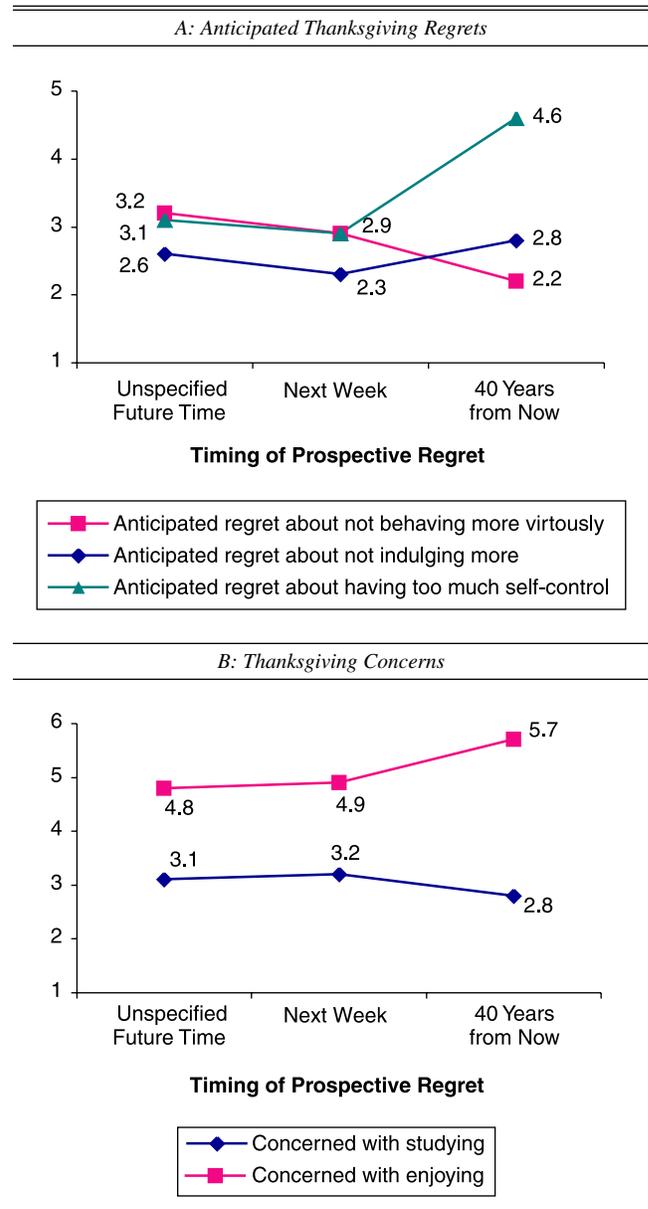
anticipated-regret condition, (2) a near-future anticipated-regret condition, and (3) an unspecified-future-time anticipated-regret condition (i.e., the timing of the prospective evaluation was not mentioned). We conducted the first wave of the study three days before the Thanksgiving weekend. Participants were asked to anticipate the regrets they would have 40 years from now (Condition 1), next week (Condition 2), or sometime in the future (Condition 3) when they look back at how they spent the upcoming Thanksgiving holiday. Participants indicated their anticipated regrets by rating their agreement with six statements using a five-point scale ranging from “strongly disagree” (1) to “strongly agree” (5). Three of these regret statements suggested that the participant would regret not indulging more during Thanksgiving (“I would feel ‘I should have enjoyed myself more during Thanksgiving,’ ‘I should have traveled more,’ and ‘I should have spent more money on things I enjoy’”), whereas the other three statements suggested that the participant would regret not behaving more virtuously during Thanksgiving (“I would feel ‘I should have studied more during Thanksgiving,’ ‘I should have worked more,’ and ‘I should have saved more money’”). Statements regarding both types of regrets were mixed together. After rating their agreement with each statement, participants were asked to anticipate what they would regret more when they looked back at how they spent Thanksgiving weekend: “not having enough self-control” or “having too much self-control.” This question was answered using a seven-point scale, in which higher (lower) ratings represented greater regret on having too much (not having enough) self-control during the Thanksgiving weekend. Participants were then asked to explain their regret judgments in writing and were subsequently thanked and dismissed.

We conducted the second wave of data collection over the Internet immediately after the Thanksgiving weekend. Participants did not know in advance that they would be e-mailed and asked to participate in a follow-up study.<sup>3</sup> Participants in all conditions were asked to list all the items they had purchased and to indicate the total amount of money they had spent during the Thanksgiving weekend. Finally, participants were asked to rate (using a seven-point scale) their agreement with two statements regarding their concerns during the Thanksgiving weekend: (1) “On Thanksgiving weekend, I was mostly concerned with studying, working, and using my time efficiently,” and (2) “On Thanksgiving weekend, I was mostly concerned with enjoying myself and having a good time.”

**Results.** A factor analysis of the six regret statements yielded two distinct factors: one representing anticipated regrets about not indulging more and one representing anticipated regrets about not behaving more virtuously. Accordingly, for each participant, we created a measure of “hedonic inaction regrets” (e.g., “I would feel ‘I should have spent more money’”) and a measure of “virtuous inaction regrets” (e.g., “I would feel ‘I should have worked more’”) by averaging the three ratings corresponding to each factor. We conducted a repeated measures analysis of variance; the within-subjects factor consisted of the type of

inaction regret (hedonic versus virtuous), and the between-subjects factor consisted of the manipulated temporal perspective (near versus distant future). The interaction between the type of inaction regret and temporal perspective was in the predicted direction ( $F(1, 43) = 10.2, p < .005$ ); as we expected, the main effect of neither regret type nor temporal perspective approached statistical significance. As Figure 4, Panel A, shows, a greater temporal perspective enhanced anticipated hedonic inaction regrets (2.8 versus 2.3;  $t = 1.9, p < .05$ ) but decreased anticipated virtuous inaction regrets (2.2 versus 2.9;  $t = 2.0, p < .05$ ). It is noteworthy that the observed interaction effect between type of inaction regret and temporal perspective is inconsistent with the action/inaction regret explanation. This alternative explanation predicts that both hedonic inaction regrets and virtuous inaction regrets will increase over time.

**Figure 4**  
THE EFFECT OF ANTICIPATED REGRET ON THANKSGIVING SHOPPING



<sup>3</sup>Of 94 participants in the first wave of the study, 74 agreed to participate in the second (surprise) wave, yielding a high response rate of 79%.

Figure 4 also shows that participants who predicted their regrets in the near future anticipated weaker hedonic than virtuous inaction regrets (2.3 versus 2.9; pairwise  $t = 1.8$ ,  $p < .05$ ). In contrast, anticipated distant-future regrets revealed stronger hedonic than virtuous inaction regrets (2.8 versus 2.2; pairwise  $t = 3.0$ ,  $p < .005$ ). Consistent with the previous findings that unspecified-future regrets mirror near-future regrets, similar results emerged when we contrasted distant- and unspecified-future regrets.

The results pertaining to the “self-control regret” scale provide additional support for our predictions (see Figure 4, Panel A). The mean rating on this scale was higher for participants anticipating distant-future regrets (4.6) than for participants anticipating near-future regrets (2.9;  $t = 4.5$ ,  $p < .001$ ) or unspecified-future regrets (3.1;  $t = 4.5$ ,  $p < .001$ ). That is, participants in the distant-future condition anticipated regretting “too much self-control” (compared with “not having enough self-control”) more than participants in the near- and unspecified-future conditions.

An examination of participants’ explanations of their anticipated regret indicated that explicit references to considerations such as enjoying life and creating special memories were significantly more prevalent under a broader temporal perspective (we coded explanations using the scheme described previously). When participants anticipated their distant-future regret, 44% (11/25) of the explanations mentioned such considerations, compared with 10% (2/20) and 3% (1/29) when near-future and unspecified-future regrets were anticipated, respectively ( $z = 2.9$  and  $3.9$ ,  $ps < .005$ ). Examples of such explanations include “I might regret being too rigid and not taking enough time for fun” and “I should try to have fun and enjoy myself.” In contrast, explicit references to concerns with working, studying, and being productive were significantly more prevalent under a narrow temporal perspective. When participants anticipated their distant-future regret, only 8% (2/25) of the explanations explicitly mentioned such considerations, compared with 40% (8/20) and 38% (11/29) when near-future and unspecified-future regrets were anticipated, respectively ( $z = 2.9$  and  $2.6$ ,  $ps < .005$ ). Examples of such explanations include “I will regret not being able to get work done” and “I will probably spend most of my time doing things that are not productive.” Thus, the analysis of participants’ explanations supports the notion that a broader perspective highlights the importance of enjoying life. Furthermore, the finding that the explanations in the unspecified-future condition were similar to those in the near-future condition supports the idea that consumers’ default mind-set is narrow.

As we hypothesized, the time horizon of the anticipated-regret manipulation had a significant effect on participants’ shopping behavior several days after the Thanksgiving weekend. Participants who anticipated their regrets in the distant future spent larger amounts of money on shopping ( $M = \$134$ ,  $Mdn = \$100$ ) than participants who anticipated their regrets in the near future ( $M = \$93$ ,  $Mdn = \$76$ ;  $t = 1.2$ ,  $p = .1$ ) or at an unspecified future time ( $M = \$63$ ,  $Mdn = \$34$ ;  $t = 2.4$ ,  $p < .01$ ).

Two independent judges (a woman and a man), who were unaware of the hypotheses, rated the items listed by participants using the coding scheme described in Study 4 (the interjudge reliability was 68%, and disagreements were resolved by discussion). As we predicted, the two inde-

pendent judges rated the shoppers’ purchased items as more pleasurable in the distant-future regret condition (2.1) than in either the near-future regret condition (1.7;  $t = 2.8$ ,  $p < .005$ ) or the unspecified-future regret condition (1.8;  $t = 2.5$ ,  $p < .010$ ). Furthermore, the relative share of pleasurable items (i.e., those receiving a rating of 3) to practical items (i.e., those receiving a rating of 1) was higher in the distant-future regret condition (57%) than in either the near-future regret condition (31%;  $z = 2.9$ ,  $p < .005$ ) or the unspecified-future regret condition (35%;  $z = 2.5$ ,  $p < .01$ ).<sup>4</sup>

Participants’ self-reported concerns during the Thanksgiving weekend were also affected by the anticipated-regret manipulations (see Figure 4, Panel B). As we predicted, participants in the distant-future regret condition were significantly more concerned with enjoying themselves and having a good time (5.7 on the seven-point scale) than participants in either the near-future regret condition (4.9;  $t = 2.0$ ,  $p < .05$ ) or the unspecified-future regret condition (4.8;  $t = 2.0$ ,  $p < .05$ ). Participants in the distant-future regret condition were also directionally less concerned with studying, working, and using their time efficiently (2.8) than participants in either the near-future regret condition (3.2;  $t = .7$ ,  $p = .2$ ) or the unspecified-future regret condition (3.1;  $t = .7$ ,  $p = .2$ ).

In summary, the findings of Study 5 support our conceptualization and generalize the results of the previous studies. The findings indicate that buying behavior can be influenced by an anticipated-regret manipulation that precedes the purchase event by several days. Furthermore, anticipating regret for a more distant time not only increases the likelihood of buying pleasurable rather than practical goods but also enhances consumers’ preference for enjoying themselves and having a good time and expands their willingness to spend on shopping.

### GENERAL DISCUSSION

The extant literature on self-control postulates that yielding to temptation evokes regret and that indulgence is detrimental for consumers in the long run (e.g., Baumeister 2002; Read, Loewenstein, and Kalyanaraman 1999). Many theories further assume that self-control regret motivates people to precommit to virtuous courses of action (e.g., Ainslie 1975; Schelling 1984; Thaler and Shefrin 1981). Building on the concept of hyperopia, the current research challenges the traditional model of self-control. Long-term regret is shown to relax self-control and to motivate consumers to spend more money and purchase and consume more indulgences and luxuries.

#### Key Findings and Alternative Explanations

We conducted a series of five studies to test our conceptual framework (see Figure 1). The findings indicate that though consumers’ default mind-set is narrow and locally focused on behaving responsibly, consumers anticipate regretting their righteousness when prompted to consider long-term regret. Importantly, such long-term self-control regret has a significant and enduring effect on consumer behavior. The studies demonstrate that whereas thinking about short-term regret motivates consumers to choose

<sup>4</sup>The judges rated 18% of the items as a 2 (“cannot determine whether the item is practical or pleasurable”).

virtue, thinking about long-term regret impels them to select indulgence. Choices of indulgence increased when participants judged the long-term rather than short-term regrets of others (Study 1), anticipated their own regret in the distant rather than near future (Study 2), and reflected on their regret regarding an actual past decision they had made in the distant rather than recent past (Study 3). Study 3 provided particularly strong support for the notion that long-term regret can increase indulgence because participants were unaware that their real choice (supposedly between two rewards for a study) was related to or affected by their regret of a past self-control decision. Two field experiments generalized these results to more realistic marketing contexts. In particular, Studies 4 and 5 demonstrated that anticipating long-term regrets can affect real purchases by motivating shoppers to buy pleasurable rather than practical items and to spend more money on shopping.

The results are also consistent with the notion that the effect of time perspective on regret is driven by the decline in indulgence guilt and persistence and even accumulation in feelings of missing out (Kivetz and Keinan 2006). Process measures provided additional evidence that such variations in self-control affect underlie the impact of perspective on regret and choice. Participants' regret explanations revealed that a broader perspective primed concerns of chronically missing out on the pleasures of life. Furthermore, consistent with the dominance of feelings of missing out in broad evaluations and of guilt in narrow evaluations, participants felt worse about more distal choices to work rather than to indulge but felt worse about more proximal choices to indulge. Thus, changes in perspective give rise not only to different self-control regrets but also to different feelings, mind-sets, and choices.

The findings also indicate that consumers do not spontaneously consider their long-term regret. Specifically, participants in the control condition, who did not consider self-control regrets, made choices that were remarkably similar to those made by participants who considered short-term regrets. Likewise, when participants predicted their self-control regret at an unspecified future time, both their anticipated regrets and their subsequent choices paralleled those of participants who anticipated near-future regrets. The notion that consumers' default perspective is narrow, giving rise to local decision rules that emphasize prudence and necessity, may help explain the findings that many consumers suffer from insufficient indulgence and hyperopia (Kivetz and Simonson 2002). Next, we discuss how the studies rule out alternative explanations for the observed reversal in self-control regret and its effect on consumers' choices.

*Errors of commission versus omission.* Gilovich and Medvec (1995) demonstrate that actions (errors of commission) evoke more regret in the short run, but inactions (errors of omission) create more regret in the long run. We employed a few measures to ensure that the self-control dilemmas we studied did not confound actions and inactions. With the exception of Study 5, the investigated regrets were related to alternative courses of action (e.g., partying versus working). In Study 5, we focused on regrets of two opposing sets of inactions, involving either insufficient indulgence (e.g., not spending enough) or insufficient righteousness (e.g., not saving enough). Thus, within each

single study, we held the type of "error" regretted (omission versus commission) constant. Regardless of the framing of both the virtue and the vice options as either actions (Studies 1, 2, 3, and 4) or inactions (Study 5), we consistently found that vices were regretted in the short run and virtues in the long run.

The distinction between action and inaction regrets may still explain the results to the extent that indulgence is viewed as counter to norms (and, therefore, as a sin of commission or action) and righteousness is perceived as the default or standard behavior (and, therefore, as a sin of omission or inaction). To address this concern, we examined specific contexts and occasions in which the norm is to indulge. For example, we examined a choice between vacationing and working on a national holiday, between rewards and lottery prizes, and of whether to indulge during Thanksgiving. A pretest examining these self-control dilemmas confirmed that in such contexts, choices of indulgence are not viewed as counter to norms (and, therefore, as actions) and righteous choices (e.g., working during a holiday) are not perceived as default behavior (and, therefore, as inactions). Thus, the temporal pattern of regrets of action/inaction cannot explain our findings.

Finally, the interaction effects we observed in Studies 3 and 5 support our explanation and are inconsistent with the rival account. In Study 3, the observed interaction between self-control action (working versus enjoying) and temporal perspective is not empirically deterministic. The action versus inaction explanation predicts that both regrets of choosing work and those of choosing enjoyment should decrease over time because both are related to actions. In Study 5, the observed interaction between regret type and temporal perspective is again inconsistent with the alternative explanation based on errors of omission versus commission. This alternative explanation predicts that both the hedonic and the virtuous inaction regrets should increase over time because both are related to errors of omission.

*Demand conditions.* In the shopping trip experiment, we took all possible measures to ensure that there were no demand characteristics; for example, we made sure that participants were not aware that there were different time perspective conditions, and we did not inform them that they would be asked to report their purchases at the mall. Although none of the participants in the shopping trip experiment articulated the hypotheses being tested, it might still be possible that shoppers' subjective perceptions and ratings of their own mall purchases were influenced by demand. To address this issue, we obtained objective evaluations of the purchased products using two independent judges. As we reported in Study 4, these objective ratings revealed the same pattern as participants' own ratings.

*Conversational norms.* Conversational norms would dictate consistency between participants' reported feelings of regret and their choices. To reduce the impact of conversational norms, we examined choices that were seemingly unrelated to the regret manipulation. Study 3 demonstrates the effect of regrets of actual past decisions on supposedly unrelated preferences and reward choices. In addition, the dependent measures in Studies 2, 3, 4, and 5 were real choices and real purchases. Although it is possible that participants could be influenced by demand characteristics and conversational norms when making hypothetical choices, it

is less likely that such factors would influence real choices and purchases.

### *Toward a Reconciliation of Myopia and Hyperopia*

The classic literature on self-control focuses on myopia and assumes that consumers regret yielding to hedonic temptations. The alternative approach of hyperopia (Kivetz and Keinan 2006; Kivetz and Simonson 2002) suggests that consumers sometimes suffer from excessive farsightedness and future-biased preferences, consistently delaying pleasure and overweighing necessity and virtue in local decisions. Consistent with this approach, the findings of the current research indicate that consumers repent hyperopia in the long run, when the effect of indulgence guilt is diminished and feelings of missing out on the pleasures of life are stronger.

How, then, can the findings related to myopia and hyperopia be reconciled? First, it is important to emphasize that these phenomena can coexist not only across individuals but also within an individual. A person might have difficulty resisting sweets and cigarettes but also have a tendency to overwork and perpetually postpone vacations.

Second, we suggest that regret of myopia is more likely for self-control lapses—situations in which consumers clearly identify an optimal decision (i.e., choosing the farsighted option) but nevertheless transgress as a result of various factors that loom large in the here and now (e.g., visceral and affective influences, ego depletion). During such self-control lapses, consumers are typically aware of the suboptimality of the (myopic) vice. Furthermore, such vices are often “weak temptations”; that is, they are unattractive when evaluated outside the immediate consumption context. For example, although a person may have difficulties waking in the morning or turning off the television at night, forfeiting oversleeping or late television viewing does not evoke feelings of missing out. The analysis of self-control lapses indicates that the guilt associated with such failures may persist and can explain why yielding to certain temptations evokes considerable regret in the long run.

In contrast, the current research investigated what we call “self-control dilemmas”—namely, situations in which the optimal choice is not transparent. The dilemma is because the option representing indulgence is inherently valuable and is not dominated by the farsighted option. In such cases, an intrapersonal tussle between desire and responsibility emerges and is often resolved using local decision rules and emotions of guilt that promote necessity and virtue. However, when such indulgence is evaluated from a broader (temporal) perspective, its forfeiture evokes missing out, whereas its selection leads to relatively lower guilt. Thus, choosing virtue over indulgence in self-control dilemmas generates increasing regret in the long run.

This research demonstrates the reversal of self-control regrets in the context of one-time choices. However, repeatedly relaxing self-control and engaging in addictive behavior may have detrimental consequences. Such addictive tendencies can be labeled as self-control lapses because they are suboptimal decisions. Reconciling myopia and hyperopia and constructing a unified model of self-control are worthwhile challenges for further research.

This research examined the impact of different time perspectives. Additional research could investigate whether

other dimensions of perspective or psychological distance (Lewin 1951; Trope and Liberman 2003) give rise to similar reversals in self-control regret. For example, when consumers are geographically distant from their everyday habitat, they are less likely to be preoccupied with daily distractions and may have the opportunity to consider their long-term regret and global goal of a more balanced and enjoyable life. This hypothesis is consistent with Landman’s (1993, p. 201) proposition that “the physical and psychological distance associated with leisure, travel, and vacation can serve to arouse regret, and they do so in part by confronting us with novel stimuli, perceptions, and experiences that break down our usual defenses while at the same time showing us what might have been.... Travel is after all, notorious for its ability to give us ‘perspective.’”

This article focused on the negative affect and cognition associated with self-control dilemmas—namely, regret, guilt, and feelings of missing out. Further research could investigate the effect of anticipated satisfaction and happiness on self-control choices. Shiv and Huber (2000) demonstrate that preferences and purchase decisions change depending on the degree to which anticipated satisfaction is evoked. Anticipated satisfaction has also been shown to affect shopping experiences (Ofir and Simonson 2007) and consumption enjoyment (Nowlis, Mandel, and McCabe 2004). Further research might build on these findings and examine short-term versus long-term anticipatory (or experienced) satisfaction. In Study 3, we report initial findings, which suggest that the intensity of positive feelings about choosing work versus pleasure changes over time and accordingly influences subsequent choices to indulge (see Figure 3, Panel B).

### *Practical Implications*

Marketers of luxury and leisure goods often try to appeal to consumers’ need for creating pleasurable and memorable experiences (Holbrook and Hirschman 1982; Schmitt 1999). Our findings suggest that though consumers are often unaware of this need when making local decisions, they regret neglecting such aspects when considering their lives from a broader perspective. Thus, self-control regret and its impact on choice provide an opportunity to promote luxuries and other indulgences more effectively. Marketers of luxuries and leisure services can prompt consumers to consider their long-term regrets, thus stimulating sales of indulgences and enhancing the postpurchase satisfaction of customers.

This research also has important implications for consumers. As former Massachusetts Senator Paul Tsongas once said, “Nobody on his deathbed ever said, ‘I wish I had spent more time at the office’” (see <http://www.quotesandpoem.com/quotes/listquotes/author/paul-tsongas>). By assessing their regrets, choices, and lives from a broader perspective, consumers can apply this time-sensitive insight in the here and now, while their lives are still ahead of them. Anticipating their distant-future regret may help people who chronically deprive themselves of hedonism to realize and remedy their hyperopia. Although consumers assume that exercising self-control will maximize future utility, it is likely that greater balance in life and “indulging responsibly” will provide the greatest satisfaction in the long run.

## REFERENCES

- Ainslie, George (1975), "Specious Reward: A Behavioral Theory of Impulsiveness and Impulse Control," *Psychology Bulletin*, 82 (April), 463–96.
- Anderson, John R. (1983), *The Architecture of Cognition*. Cambridge, MA: Harvard University Press.
- Bakker, A.B., B.P. Buunk, and A.S.R. Manstead (1997), "The Moderating Role of Beliefs in Self-Efficacy in the Relationship Between Anticipated Feelings of Regret and Condom Use," *Journal of Applied Social Psychology*, 27 (22), 2001–2014.
- Baumeister, Roy F. (2002), "Yielding to Temptation: Self-Control Failure, Impulsive Purchasing, and Consumer Behavior," *Journal of Consumer Research*, 28 (March), 670–76.
- Carver, Charles S. and Michael F. Scheier (1990), "Principles of Self-Regulation: Action and Emotion," in *Handbook of Motivation and Cognition: Foundations of Social Behavior*, Vol. 2, E. Tory Higgins and Richard M. Sorrentino, eds. New York: Guilford Press, 3–52.
- Cooke, Alan D.J., Tom Meyvis, and Alan Schwartz (2001), "Avoiding Future Regret in Purchase-Timing Decisions," *Journal of Consumer Research*, 27 (March), 447–59.
- Dhar, Ravi and Itamar Simonson (1999), "Making Complementary Choices in Consumption Episodes: Highlighting Versus Balancing," *Journal of Marketing Research*, 36 (February), 29–44.
- Gilovich, Thomas and Victoria Husted Medvec (1995), "The Experience of Regret: What, When, and Why," *Psychological Review*, 102 (2), 379–95.
- Greenleaf, Eric A. (2004), "Reserves, Regret, and Rejoicing in Open English Auctions," *Journal of Consumer Research*, 31 (September), 264–73.
- Hettis, John, David Boninger, David Armor, Faith Gleicher, and Ariel Nathanson (2000), "Influence of Anticipated Counterfactual Regret on Behavior," *Psychology & Marketing*, 17 (4), 345–68.
- Hoch, Steve and George Loewenstein (1991), "Time-Inconsistent Preferences and Consumer Self-Control," *Journal of Consumer Research*, 17 (March), 492–507.
- Holbrook Morris B. and Elizabeth C. Hirschman (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feeling, and Fun," *Journal of Consumer Research*, 9 (September), 132–40.
- Holecck, Andrea (2006), "Retailers Gear Up for Holiday Sales," *The Times*, (November 5), (accessed August 20, 2008), [available at [www.nwintimes.com/articles/2006/11/05/business/business/0459476f7bc7cdb38625721b007c36e1.txt](http://www.nwintimes.com/articles/2006/11/05/business/business/0459476f7bc7cdb38625721b007c36e1.txt)].
- Kahneman, Daniel (1995), "Varieties of Counterfactual Thinking," in *What Might Have Been: The Social Psychology of Counterfactual Thinking*, Neal J. Roese and James M. Olson, eds. Mahwah, NJ: Lawrence Erlbaum Associates, 375–96.
- Kivetz, Ran and Anat Keinan (2006), "Repenting Hyperopia: An Analysis of Self-Control Regrets," *Journal of Consumer Research*, 33 (September), 273–82.
- and Itamar Simonson (2002), "Self-Control for the Righteous: Toward a Theory of Precommitment to Indulge," *Journal of Consumer Research*, 29 (September), 199–217.
- Landman, Janet (1993), *Regret: The Persistence of the Possible*. New York: Oxford.
- Lecci, Len, Morris Okun, and Paul Karoly (1994), "Life Regrets and Current Goals as Predictors of Psychological Adjustment," *Journal of Personality and Social Psychology*, 66 (4), 731–41.
- Lewin, Kurt (1951), *Field Theory in Social Science*. New York: Harper.
- Nowlis, Stephen, Naomi Mandel, and Deborah Brown McCabe (2004), "The Effect of a Delay Between Choice and Consumption on Consumption Enjoyment," *Journal of Consumer Research*, 31 (3), 502–510.
- Ofir, Chezy and Itamar Simonson (2007), "The Effect of Stating Expectations on Customer Satisfaction and Shopping Experience," *Journal of Marketing Research*, 44 (February), 164–74.
- Parker, Dianne, Stephan G. Stradling, and Antony S.R. Manstead (1996), "Modifying Beliefs and Attitudes to Exceeding the Speed Limit: An Intervention Study Based on the Theory of Planned Behavior," *Journal of Applied Social Psychology*, 26 (1), 1–19.
- Prelec, Drazen and Richard J. Herrnstein (1992), "A Theory of Addiction," in *Choice Over Time*, George Loewenstein and Jon Elster, eds. New York: Russell Sage, 331–60.
- Read, Daniel, George Loewenstein, and Shobana Kalyanaraman (1999), "Mixing Virtue and Vice: Combining the Immediacy Effect and the Diversification Heuristic," *Journal of Behavioral Decision Making*, 12 (4), 257–73.
- Richard, Rene, Nane K. de Vries, and Joop van der Pligt (1998), "Anticipated Regret and Precautionary Sexual Behavior," *Journal of Applied Social Psychology*, 28 (15), 1411–28.
- , Joop van der Pligt, and Nane K. de Vries (1996), "Anticipated Regret and Time Perspective: Changing Sexual Risk-Taking Behavior," *Journal of Behavioral Decision Making*, 9 (3), 185–99.
- Schelling, Thomas C. (1984), "Self-Command in Practice, in Policy, and in a Theory of Rational Choice," *American Economic Association Proceedings*, 74 (May), 1–11.
- Schindler, Robert M. (1998), "Consequences of Perceiving Oneself as Responsible for Obtaining a Discount: Evidence for Smart-Shopper Feelings," *Journal of Consumer Psychology*, 7 (4), 371–92.
- Schmitt, Bernd (1999), *Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, and Relate to Your Company and Brands*. New York: The Free Press.
- Shiv, Baba and Joel Huber (2000), "The Impact of Anticipating Satisfaction on Choice," *Journal of Consumer Research*, 27 (September), 202–216.
- Simonson, Itamar (1992), "The Influence of Anticipating Regret and Responsibility on Purchase Decisions," *Journal of Consumer Research*, 19 (June), 105–117.
- Sobel, Michael E. (1982), "Asymptotic Intervals for Indirect Effects in Structural Equations Models," *Sociological Methodology*, Samuel Leinhardt, ed. San Francisco: Jossey-Bass, 290–312.
- Thaler, Richard H. and Hershey M. Shefrin (1981), "An Economic Theory of Self-Control," *Journal of Political Economy*, 89 (April), 392–410.
- Trope, Yaacov and Nira Liberman (2003), "Temporal Construal," *Psychological Review*, 110 (3), 403–421.
- Tsiros, Michael and Vikas Mittal (2000), "Regret: A Model of Its Antecedents and Consequences in Consumer Decision Making," *Journal of Consumer Research*, 26 (March), 401–417.
- Wallendorf, Melanie and Eric J. Arnould (1991), "'We Gather Together': Consumption Rituals of Thanksgiving Day," *Journal of Consumer Research*, 18 (June), 13–31.

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