

Consumer Mood-Regulation and Self-Control: A Strategic View

Yael Zemack-Rugar*

* Yael Zemack-Rugar is a doctoral candidate at the Fuqua School of Business, Duke University, Box 90120, Durham, NC 27708; Phone: 919-660-3745; Fax: 919-660-7996;

yz9@mail.duke.edu.

This article is based on the author's dissertation research. The author would like to thank James R. Bettman and Gavan J. Fitzsimons for their invaluable assistance, their dedication, and their unwavering support. The author also thanks John G. Lynch Jr. for his important contribution and input and Wendy Wood, Rosellina Ferraro, and Selin Malkoc for their insightful thoughts and comments.

Previous research has demonstrated that negative moods consistently lead to self-control failures. Recently it has been posited that these failures occur because individuals in negative moods strategically prioritize mood-regulation goals over self-control. This paper extends and tests the implications of such a strategic view by accounting for consumers' cognitions regarding what self-control actions they believe will best serve their mood-regulation goals. In study one mood-regulation goals and consumer beliefs are independently manipulated. Results support a strategic view of mood-regulation and self-control and demonstrate that a negative (i.e., sad) mood leads to absolute *increases* in self-control, contrary to existing theories and findings. Study two further extends this strategic theory and examines different, specific negative moods that are naturally accompanied by different mood-regulation cognitions. Results show that self-control is determined not by the mere presence or absence of mood-regulation goals, but rather by the specific mood type and the specific mood-regulation cognitions that accompany that mood. Study three shows that self-control further depends on individual mood coping characteristic. Different individuals believe different self-control levels are useful for mood-regulation and accordingly they adopt different self-control levels even on the same task and in the same mood.

Many consumer choices and decisions involve the need to exert self-control, and often consumers fail to exert such control (Ariely and Wertenbroch 2002; Dhar and Wertenbroch 2000; Shiv and Fedorikhin 1999). Self-control failures are at the heart of many societal problems, such as epidemic obesity, high personal debt, and rising health care costs. Consumers appear particularly prone to self-control failures in negative moods (Baumeister 1997; Leith and Baumeister 1996; Rehm and Plakosh 1975; Seeman and Schwarz 1974; Wansink 1994). In this research we examine the link between negative moods and self-control, and in particular the link between mood-regulation motivation (that commonly arises in negative moods) and self-control choices. We propose and test the implications of a model that posits self-control and mood-regulation goals are strategically linked.

Previously, negative moods have been linked to self-control failures (Baumeister 1997; Leith and Baumeister 1996). Such failures were initially explained as a form of self-punishment (Carveth 2001), an inability to reason (Leith and Baumeister 1996), or the result of lowered self-efficacy perceptions (Bandura and Schunk 1981). Alternatively, it was hypothesized that in negative moods individuals' resources were engaged in mood-regulation activities and thus unavailable for self-control (Dale and Baumeister 1999; Baumeister et al. 1998).

Recently, Tice, Bratslavsky, and Baumeister (2001) hypothesized that failures of self-control in negative moods occur due to the strategic prioritization of mood-regulation goals over self-control. Having limited resources (Baumeister et al. 1998), Tice et al. (2001) argued that individuals chose to forgo self-control in favor of mood-regulation, which is a more urgent, important goal; thus, mood-regulation appeared to override self-control (Tice et al. 2001).

The current paper acknowledges the primary importance of mood-regulation goals (Catanzaro and Mearns 1990; Erber 1996; Larsen 2000; Morris and Reilly 1987), and more

deeply examines the nature of the relationship between mood-regulation and self-control. Specifically, a model is presented in which mood-regulation and self-control are strategically linked; this relationship is moderated by mood-regulation cognitions. By defining and examining the strategic link between mood-regulation and self-control, this research extends existing theories and findings in several important ways.

First, to fully test the implications of a strategic view, one must account not only for goals themselves, but also for the cognitions that indicate how those goals might be achieved (Carver and Scheier 1998). Consumers' thoughts regarding what levels of self-control will best serve their mood-regulation needs are likely to moderate their self-control behaviors. Research to date has been limited to or has created situations in which consumers appear to *always* believe reducing self-control will enhance their mood. We examine whether this belief is indeed always true, and if not, how different cognitions affect self-control behavior in negative moods.

Second, the moderating role of mood-regulation related cognitions has not been isolated. Manipulations of mood-regulation goals and mood-regulation cognitions have often been confounded. To tease apart the effects of mood-regulation goals and cognitions, the current research independently manipulates each. In three studies strong support is found for a strategic link between mood-regulation and self-control, in which cognitions regarding the utility of self-control for mood-regulation moderate the effects of negative moods on self-control choices.

Third, by including mood-regulation related cognitions in a strategic model of self-control, the current research demonstrates repeatedly that self-control in negative moods can be *increased*. This finding runs contrary to existing research and theories (for a summary see Tice et al. 2001). Moreover, we extend prior findings by examining different, specific negative moods. Prior research has combined different negative moods (e.g., sadness, anxiety, stress) into a single

category. This research compares different, specific negative moods (e.g., sadness, guilt) and demonstrates that these moods are accompanied by different mood-regulation cognitions.

Importantly, these cognitions moderate the effects of negative moods on consumer self-control.

Finally, we extend prior findings by examining individual characteristics that may affect mood-regulation cognitions. We show that different individuals in the same negative mood and facing the same self-control task believe different self-control strategies are useful for mood-regulation. Accordingly, these individuals exert self-control at predictably different levels. By teasing apart the effects of mood-regulation goals and cognitions, this paper shows that self-control is not merely overridden by mood-regulation goals, but rather “recruited” to their service.

Investigating the use of self-control for mood-regulation is important in two ways. First, mood-regulation goals are not only prevalent (in particular in negative moods; Erber 1996), but also of primary importance; they are pursued via an assortment of strategies and thus likely to affect a variety of consumer behaviors (Baumeister, Heatherton, and Tice 1994). Thus, investigating the effects of mood-regulation goals can provide insight into consumer choice. Although prior research has examined mood-regulation goals in areas such as self-gifting (Luomala and Laaksonen 1999; Mick and DeMoss 1990) and compulsive shopping (O’Guinn and Faber 1989), most consumer research has focused on the effects of moods per se (e.g., Adaval 2003; Brendl, Higgins, and Lemm 1995; Escalas and Stern 2003; Keller and Block 1995; Luce 1998; Pham et al. 2001; Williams and Aaker 2002). Thus, more research on mood-regulation and the consumption strategies individuals adopt in its service is needed. Second, the theory presented here can provide a more nuanced understanding of some of the conditions under which consumers succeed or fail at self-control. Such an understanding is important, since self-control failures are at the heart of so many societal problems.

The article will be structured as follows: First, we present a brief overview of the existing self-control literature and its view of the link between self-control and mood-regulation. Then, we present our theoretical model and general hypotheses, followed by three studies supporting this model and a discussion of the conclusions and implications of our findings.

STRATEGIC SELF-CONTROL, MOOD-REGULATION, AND THE MODERATING ROLE OF COGNITIONS

Numerous researchers have found that self-control is hampered by the presence of negative moods (e.g., Baumeister 1997; Leith and Baumeister 1996; Rehm and Plakosh 1975; Seeman and Schwarz 1974). In a recent article, Tice et al. (2001) claimed these failures of self-control were caused by individuals strategically abandoning self-control in favor of mood-regulation goals. They found self-control levels in a negative mood differed depending on whether individuals' mood was "frozen" or not. To "freeze" participants' mood, some participants were told that their mood could not change, irregardless of their actions. Results demonstrated that when mood-regulation goals were presumably present ("non-frozen" mood condition) self-control was reduced; when mood-regulation goals were presumably absent ("frozen" mood condition) self-control was not affected. Thus, Tice et al. (2001) concluded that mood-regulation strategically overrides self-control.

However, in Tice et al.'s (2001) paradigm, mood-regulation goals were likely equally present in both the "frozen" and "non-frozen" conditions. Both "frozen" and "non-frozen" participants were induced into the same negative (sad) mood, and thus likely espoused similar, active mood-regulation goals (Erber 1996). However, the mood freezing manipulation may have affected participants' *cognitions* regarding how they might act to modify their mood. Individuals whose mood was malleable likely *believed* indulging would help their mood, whereas

individuals whose mood was frozen likely believed that indulging would not benefit their mood¹. To the extent that the mood-freezing manipulation differentially affected mood-regulation beliefs (i.e., cognitions) rather than the presence of mood-regulation goals, behaviors may have reflected these different cognitions.

In order to identify whether prior results were driven by mood-regulation cognitions or by mood-regulation goals, one needs to manipulate cognitions and goals independently. Such independent manipulation would help identify whether mood-regulation and self-control are indeed strategically linked and whether mood-regulation cognitions play a moderating role in this strategic relationship. In the first study, these two factors, mood-regulation goals and cognitions, are directly, independently manipulated. We predict that when mood-regulation goals are not salient, cognitions will have no effect on self-control choices. However, when mood-regulation goals are salient, cognitions that link different self-control levels to achieving mood-regulation goals will affect behavior strongly. For example, if a sad consumer believes eating cake rather than a salad would make him feel better, then he might relinquish self-control and choose to consume the cake. However, if that same sad consumer believes that eating the salad and adding a work-out at the gym would make him feel better, he will choose to demonstrate a very high level of self-control.

Accordingly, in the first study consumers in a negative mood who believe indulging in a guilty-pleasure will improve their mood reduced self-control; however, consumers who believed curbing indulgence will improve their mood increased self-control. Additionally, consumers in a neutral mood, with no salient mood-regulation goals (Wilson, Gilbert, and Centerbar 2003), behaved the same irregardless of whether they believe indulging will help or hurt their mood.

¹ In fact, Tice et al. (2001) explicitly told participants in the frozen mood condition in study 1 that indulging would not improve their mood.

This first study demonstrates the strategic use of self-control for mood-regulation and the role of cognitions in determining self-control levels. Additionally, results show that even in a sad mood, self-control increases in an absolute sense, contrary to existing theories and findings (for summary see Tice et al. 2001).

The second study extends this strategic view by comparing different negative moods that are accompanied by naturally varying cognitions (Lerner and Keltner 2000). A pretest revealed that individuals in different, specific negative moods have different beliefs regarding the utility of self-control for mood-regulation. These naturally varying beliefs allow for a more natural examination of the effects of mood-regulation cognitions on self-control. Specifically, by eliciting different negative moods (e.g., sad vs. guilty) different mood-regulation cognitions are indirectly activated; study two examines how these cognitions work to affect self-control behaviors.

The third study further extends the strategic model linking mood-regulation to self-control by examining the moderating role of individual characteristics. Specifically, prior research suggests that individual characteristics (e.g., guilt-proneness; Tangney, Wagner, and Gramzow 1992) can affect the degree to which individuals believe self-control is useful for mood-regulation. Thus, measuring individual characteristics provides a natural proxy for different mood-regulation related cognitions; one can then examine the moderating effects of these individual characteristics (and cognitions) on self-control choices. For example, although guilty individuals generally tend to demonstrate high self-control on tasks that may enable them to provide restitution and assuage their guilt (Baumeister, Ries, and Delespaul 1994; Estrada-Hollenbeck and Heatherton 1998), guilty individuals high in guilt-proneness cope with their guilt in less adaptive ways and do not demonstrate such self-control (Harder 1995; Harder, Cutler, and Rockart 1992; Kubany and Watson 2003).

To summarize, this article presents a nuanced, strategic view of mood-regulation and self-control. According to this view, self-control is used strategically in the service of mood-regulation. As a result of this strategic use, self-control can either increase or decrease in negative moods, depending on individuals' cognitions regarding the utility of self-control for mood-regulation. In this research, these cognitions are manipulated either directly (study 1), indirectly via eliciting different, specific negative moods (study 2) or measuring individual mood-coping characteristics (study 3).

STUDY 1

Overview

In this study we independently manipulate the salience of mood-regulation goals and individuals' beliefs regarding which self-control behaviors (i.e., indulging vs. abstaining) will best serve these goals. We demonstrate that mood interacts with cognitions to determine self-control behaviors. Thus, in a neutral mood, where the mood-regulation motivation is weak, cognitions have no effect on behavior. However, in a sad (i.e., negative) mood, where the mood-regulation motivation is salient, cognitions have a strong effect. Thus, when sad individuals believe increasing self-control will enhance their mood, they show higher self-control as compared to individuals in a sad mood who believe indulging will help their mood, and as compared to individuals in the neutral, baseline condition.

Theory and Hypotheses

Prior research has confounded the effects of mood-regulation goals and mood-regulation related cognitions (Herman and Polivy 1975; Tice et al. 2001). This first study separates the effects of the two by manipulating each independently. To manipulate beliefs, participants are led to believe that self-control will affect their mood differently. That is, some participants are

told reducing self-control will help their mood and some are told reducing self-control will hurt their mood. To manipulate mood-regulation goal salience, participants in a negative (i.e., sad) mood are compared to those in a neutral mood. Whereas participants in a sad mood are likely to espouse strong and salient mood-regulation goals, participants in a neutral mood are unlikely to espouse such goals (Morris and Reilly 1987; Thayer, Newman, and McClain 1994; Wilson, Gilbert, and Centerbar 2003).

According to the strategic model presented here, if mood-regulation goals are salient (e.g., in a sad mood), individuals' beliefs regarding what self-control levels would best serve those goals should have a strong effect on behavior. Thus, if individuals in a sad mood believe reducing self-control (i.e., eating fatty food) will make them feel better, they will reduce self-control. Although this effect is well established (Herman and Polivy 1975), the model also predicts the opposite effect: if individuals in a sad mood believe that increasing self-control will make them feel better, they will increase self-control. Additionally, the model predicts that in a neutral mood, when mood-regulation is not salient, beliefs regarding the effects of self-control on mood-regulation will not affect behavior.

These general hypotheses lead to several specific predictions. First, in a negative mood individuals who believe eating will help their mood will indulge more than individuals who believe eating will hurt their mood. This prediction may seem straightforward, but note that the idea that a negative mood may serve to enhance self-control runs contrary to existing theories (Rehm and Plakosh 1975; Tice et al. 2001). Moreover, such findings would indicate that it is not mood valence per se that determines self-control levels (Baumeister 1997; Baumeister and Heatherton 1996; Tice et al. 2001), but rather the interaction between mood-regulation goals and related cognitions. Second, the interaction between mood-regulation goals and cognitions is

expected to cause an absolute increase in self-control for individuals in a negative (i.e., sad) mood who believe indulging will hurt their mood as compared to the neutral baseline.

Design and participants

The study is a 2 (Mood: Sad vs. Neutral) by 2 (Cognition: Believe eating helps vs. Believe eating hurts) between subjects design. Participants were 102 female undergraduate students at a southeastern university who participated in return for \$10.

Method

Previous research shows that the effects of mood on food consumption are stronger for females (Forster and Jeffery 1986; Greeno and Wing 1994) and restrained-eaters (Herman and Polivy 1975). Thus, participants were females only, and they were asked to arrive at the study after not eating for three hours prior to the study, simulating a state of restrained eating (Herman and Polivy 1975; Nisbett 1972).

The study was presented as two unrelated research efforts. The first part was presented as an “Emotional Intelligence” study. Participants were asked to read either a sad or a neutral story (adapted from Wenzlaff, Wegener, and Roper 1988) and imagine it happened to them. Participants then filled out a questionnaire asking how well they could imagine the story, how positive/negative it was and how good/bad they presently felt (each question on a seven-point scale). Subsequently, participants completed the PANAS mood scale (Watson, Clark, and Tellegen 1988). Participants were then told they needed to take a break from the emotion study (to allow emotions to fade) and were asked to participate in a second, ostensibly unrelated study involving a taste-test.

Consenting participants were taken into another room where a second researcher presented them with three bowls of food: pretzels, “Goldfish” crackers, and mini “Fudge

Shoppe” cookies. The researcher asked participants to taste each of the foods and fill out a questionnaire rating them. Participants were told they were allowed to eat as much or as little of each food as they desired.

Before exiting the “taste-test,” the researcher manipulated the participants’ belief regarding whether eating would help or hurt their mood. In the “Believe eating helps” condition, the researcher commented (as she exited the room): “Oh, by the way, some participants have expressed concern that participating in this taste-test study might affect their participation in the first emotional study they are to complete shortly. In particular, participants have been concerned about the fact that food may affect your mood. For example, many people believe food (especially chocolate and carbohydrates) can make you feel better. This belief is true; it has been found that eating can sometimes improve your mood. However, it has no effect on either this or the other study, so you need not be concerned.” For the “Believe eating hurts” condition, the sentence before last was modified to state: “This belief is untrue; it has been found that eating can sometimes worsen your mood.”

“Food evaluation” packets were left with participants, including a measure of their hunger, followed by an evaluation of how tasty, tempting, good for you, and satisfying each food was and to what degree they liked it, enjoyed it, and were likely to consume it outside of the study context (all seven-point scales). These measures were designed both to serve as covariates and to help identify which (if any) of the foods could be considered a guilty-pleasure and subsequently used as the main dependent variable. All participants were instructed to complete the taste-test and packet and wait for the researcher to return. The researcher returned after seven minutes, ensuring that all participants spent an equal amount of time with the food. Participants

were asked what they believed the goal of this portion of the study was. Subsequently, the researcher weighed each of the bowls of food and recorded the amount consumed of each snack.

Following the “taste-test,” participants were asked to complete the “first” study. They were asked to provide height and weight information. These measures served as potential covariates². Finally, participants were debriefed and paid.

Results

None of the participants were aware of the goals of the study or the relationship between the two studies. Three participants refused to complete the “taste-test,” and thus their data could not be used. Ninety-nine participants are included in the analysis.

Manipulation Check. Mood states measured after reading the stories were significantly different; participants in the Sad mood condition scored significantly higher on the negative affect portion of the PANAS scale ($M=2.7$) than participants in the Neutral mood condition ($M=1.4$; $F(1,92)=74.85, p<.0001$)³. Additionally, participants in the Sad mood indicated the story they read was less positive than participants in the Neutral mood ($M_{sad}=2, M_{neutral}=5.2, F(1,96)=95.08, p<.0001$) and that they felt more negative overall than participants in the Neutral mood ($M_{sad}=5.9, M_{neutral}=3.5, F(1,96)=55.89, p<.0001$).

Dependent Variable Selection. We examined whether consumption levels of all three foods could be considered to measure the same construct (i.e., self-control) by conducting a repeated measures analysis using Food Type as a within subjects factor. We found a significant main effect for food type ($F(2,190)=83.17, p<.0001$) and a significant interaction of Food type

² Across the set of studies, participants also completed different subsets of additional covariate scales, including: dieting (Herman and Polivy 1975; Martz, Sturgis, and Gustafson 1996), self-control (Tangney and Baumeister 2001), impulsivity (Puri 1996), body-esteem (Franzoi and Shields 1984), and mood-regulation (Catanzaro and Mearns 1990). None of these scales were significant in any of the analyses.

³ Due to missing values, five participants are not included in the NA scale (N=94), and one participant is not included in each of the remaining measures (N=98).

by Mood by Belief ($F(2,190)=6.93, p<.005$), indicating that the eating patterns for the different foods were significantly different within each of the study cells, and overall. Additionally, the correlation among the amounts of each food consumed was very low (Cronbach Alpha =.17), supporting the idea that not all snacks were measuring indulgence.

Thus, we identified which food was considered the most tempting and yet the least “good for you,” indicating that it would be the best measure for self-control. The cookies scored significantly higher on temptation ($M=5.6$) than both the “Goldfish” ($M=4.87, t(98)=5.53, p<.005$) and the pretzels ($M=3.79, t(98)=9.49, p<.0001$) and significantly lower on the “good for you” measure ($M=2.31$) than both the “Goldfish” ($M=3.52, t(98)=6.87, p<.0001$) and the pretzels ($M=4.34, t(98)=10.44, p<.0001$). Thus, cookie consumption was used as the self-control measure.

Self-control. We conducted an ANOVA to examine the effects of Mood and Cognitive Belief on the amount of cookies consumed (in grams)⁴. The only significant covariates were the overall liking score for the cookie⁵ and the height-to-weight ratio of the participant. As predicted, we found a significant main effect for mood ($F(1,87)=6.01, p<.05$), qualified by a significant interaction of Mood*Cognitive Belief ($F(1,87)=12.29, p<.05$; see fig. 1).

 Insert figure 1 about here

As predicted, participants in a sad mood who believed eating would hurt their mood indulged significantly less than participants in a sad mood who believed eating would help their mood ($M_{help}=23.48, M_{hurt}=13.28, F(1,87)=11.53, p<.05$). Participants in a neutral mood

⁴ Due to missing values six participants could not be included in the analysis.

⁵ Average of ratings of how tasty, tempting, enjoyable and satisfying the cookie was, along with how much participants liked, enjoyed it, and were likely to consume it outside of the study context (Cronbach Alpha=.87).

indulged to the same degree regardless of their belief ($M_{help}=22.62$, $M_{hurt}=27.4$, $F(1,87)=2.4$, $p>.1$). Most importantly, the key hypothesis that participants in a negative (i.e., sad) mood would indulge *less than* participants in a neutral mood when both groups believed eating would hurt their mood was confirmed ($M_{sad}=13.28$, $M_{neutral}=27.4$, $F(1,87)=18.03$, $p<.0001$).

Discussion

The first study provides initial support for the strategic link between self-control and mood-regulation, and the moderating role of cognitions in determining self-control levels in negative moods. The results show that self-control was not determined by the mere presence of mood-regulation goals. Rather, it was determined by the interaction between individuals' cognitions regarding the usefulness of self-control for mood-regulation and the salience of mood-regulation goals.

In a neutral mood, where mood-regulation goals were less salient, self-control levels were not affected by mood-regulation related cognitions. However, in a sad mood, where mood-regulation goals were salient, participants adjusted their self-control levels according to their mood-regulation cognitions. Sad individuals who believed reducing self-control would help their mood reduced their self-control. Conversely, sad individuals who believed increasing self-control would help their mood increased their self-control. Moreover, this increase was absolute (compared to a neutral baseline), showing an overall increase in self-control for individuals in a negative mood.

In sum, mood-regulation did not merely override self-control, but rather “recruited” self-control to its service. Thus, individuals either increased or decreased self-control in negative

moods, depending on whether individuals believed self-control was useful or detrimental for achieving mood-regulation goals.

This study is limited in that the participant population was constrained to females, restricting generalizability. Study two addresses this limitation by including both male and female participants. Additionally, rather than directly manipulating cognitions, the second study relies on naturally varying cognitions. We first examine whether different negative moods are accompanied by different cognitions. If this is the case, eliciting specific negative moods can indirectly engender specific mood-regulation cognitions, rather than directly imposing such cognitions on participants. Moreover, examining naturally varying cognitions allows us to examine the strategic use of self-control and the moderating role of cognitions in real-life, consumer-related decisions.

STUDY 2

Overview

A pretest demonstrates that consumers' beliefs regarding the utility of self-control for mood-regulation vary across different negative moods. These different specific moods in turn moderate individuals' self-control levels, resulting in higher self-control by participants in a guilty mood than by participants in either a sad or neutral mood.

Theory and Hypotheses

Although similar in valence, negative moods can be quite different in the cognitions that accompany them (Lerner and Keltner 2000). Thus, although both sad and guilty moods are likely to engender a strong mood-regulation goal (Erber 1996; Larsen 2000), cognitions regarding the strategic utility of self-control for achieving that goal may vary. For example, individuals who

feel guilty may avoid rewarding themselves or indulging, as self-reward after a bad deed may only serve to deteriorate their mood further (Darlington and Macker 1966; Hoffman 1998; Tangney and Dearing 2002). However, individuals in a sad mood often believe indulging in immediate rewards might help their mood (Rehm and Plakosh 1975; Seeman and Schwarz 1974).

To examine whether these cognitions indeed vary among individuals in a sad versus guilty mood, we conducted a pretest. Sixty participants completed a between-subjects design with two mood conditions: Sad and Guilty. Participants in each condition were asked to recall a recent event that had caused them to feel either sad or guilty. Participants subsequently indicated the degree to which they believed indulging in three guilty-pleasures would serve to enhance their mood if the story they recounted had just occurred (seven-point scale, Strongly Agree/Strongly Disagree). As predicted, participants in the guilty condition felt that indulging themselves (in various ways) was significantly less likely to improve their moods than did participants in the sad condition (see table 1).

Insert table 1 about here

Thus, eliciting specific negative moods can serve as an indirect way to activate different mood-regulation cognitions. These cognitions should moderate participants' tendency to exert self-control. Specifically, individuals in a guilty mood are expected to exert more self-control on a guilty-pleasure task than individuals in a sad mood. Moreover, this will occur as a result of absolute suppression of indulgence on the part of guilty people (Tangney and Dearing 2002), resulting in more self-control by guilty people when compared to a neutral baseline. Such an

increase in self-control in a negative mood runs contrary to existing theories and findings.

Additionally, demonstrating that specific negative moods lead to different self-control levels depending on the mood-regulation cognitions that accompany them provides support for the strategic model presented here.

Design and participants

We conducted a 3 Mood (Sad, Guilty, Neutral) between subjects study, with a dependent measure of self-control on a guilty-pleasure task. Participants were 82 undergraduate students at a southeastern university who participated in return for \$10 pay and the opportunity to win \$50.

Method

The “two-study” procedure used in study 1 was utilized again, with several differences. For the “Emotional Intelligence” study, the first researcher asked participants to write a story about a recent event that made them feel either sad or guilty, or about a regular day in their life (neutral condition). After meditating upon the story, participants completed the same measures as in study 1, and an “enhanced” PANAS mood scale (Watson et al. 1988) with three added adjectives designed to measure guilt (guilt-ridden, culpable, remorseful).

As the “second, unrelated” study, a second researcher asked participants to allocate a \$50 coupon (which they were eligible to win) between a CD/DVD purchase and a school- supply purchase⁶. The amount allotted to the CD/DVD purchase served as the guilty-pleasure dependent variable. Participants were then asked to indicate what they thought the goal of the study was, referring to any of the tasks they had completed.

Participants then completed the “first” study by filling manipulation checks indicating how appealing, tempting, and good for them the CD/DVD and school supplies coupons were,

⁶ In an earlier pretest, participants from the same population were asked to list examples of guilty-pleasures (i.e., things you like to spend money on but know you should not or things that you consider a tempting luxury but know you do not really have money for) and indicated CDs and DVDs to be such products.

how good (i.e., happy or excited) the coupons made them feel and how happy they would be to receive each as a gift (each on a seven-point scale). These measures served as covariates.

Results

Hypothesis guessing responses and debriefing indicated participants were not aware of the study goals or hypotheses.

Mood Manipulation Check. We conducted an ANOVA using the positive and negative mood PANAS subscales as the dependent variable (each separately). We found that overall, the moods varied in the expected directions (Negative affect: $M_{sad} = 2.31$, $M_{neutral} = 1.37$, $F(1,79) = 29.4$, $p < .0001$; $M_{guilty} = 2.24$, $F(1,79) = 24.12$, $p < .0001$; Positive affect: $M_{sad} = 2.17$, $M_{neutral} = 2.92$, $F(1,79) = 14.58$, $p < .0005$; $M_{guilty} = 2.26$, $F(1,79) = 11.15$, $p < .005$).

We also created a guilt-score comprised of the average on the adjectives guilty, guilt-ridden, remorseful, and culpable (Cronbach alpha=.84). Our ANOVA indicated that although guilt-scores in the guilty condition differed from those in the sad and neutral condition as expected (Guilt-score: $M_{guilty} = 2.82$, $M_{sad} = 2.12$, $F(1,79) = 9.12$, $p < .005$; $M_{neutral} = 1.29$, $F(1,79) = 35.97$, $p < .0001$), participants in the sad condition experienced significantly more guilt than participants in the neutral condition ($F(1,79) = 10.78$, $p < .005$). Additionally, the guilt level in the sad and guilty conditions was quite similar in magnitude ($M_{guilty} = 2.82$, $M_{sad} = 2.12$). Finally, participants in the guilty condition experienced only moderate levels of guilt on average ($M = 2.82$, below the midpoint of the scale). We thus concluded that some participants may not have complied with the mood manipulation instructions⁷.

⁷ This is not unlikely, as sadness and guilt are often difficult to separate when telling a story. Additionally, participants in the guilty condition may have avoided discussing a very negative event that they caused, as meditating on this event may have proven to be a highly negative experience.

To more accurately identify participants whose emotion did not correspond to their assigned mood condition, a single coder, blind to the condition, evaluated each of the stories for mood (guilty, sad) and strength. In the sad condition, stories were coded as non-compliant if they included a sad event, but focused on the participants' feelings of guilt surrounding that event (e.g., a story about the death of a grandmother focused on guilt at not being at her side or not visiting her over the last several months). In the guilty condition, stories were coded as non-compliant if: (1) their topic/effect was inconsequential, or (2) they did not include a significant close other or a significant transgression, and/or (3) they were not interpersonal in nature; all three are requirements for guilt to occur (Baumeister et al. 1994). Finally, stories were considered non-compliant if participants focused on the resolution of the story rather than on the emotions they experienced.

The coder identified eight participants in the sad condition with a high level of guilt ($M=3.7$) and 10 participants in the guilty condition with a low level of guilt ($M=1.65$). We removed these 18 participants from further analysis, thus dropping those participants for whom the mood manipulation was not successful. For completeness, we report the results of our analysis for both the full and reduced data sets. We also examine the effects of guilt level (measured) as a continuous variable (unrelated to assigned condition) in determining self-control behaviors. All analyses yield substantively similar results.

For the remaining 64 participants who complied with the mood induction procedures, the mood manipulation checks are consistent with their assigned moods: (1) the sad and neutral moods have the same level of guilt ($F(1,61)=4.33, p>.05$), (2) the sad condition has an overall lower level of guilt than the guilty condition by a large magnitude ($M_{sad} = 1.6, M_{guilty} = 3.44$),

and (3) the guilty mood condition has a high overall average guilt score. This data set thus allows for a cleaner separation of these two moods' (sad vs. guilty) effects.

Dependent Variable Manipulation Check. We created an average “pleasure” score using the ratings of how appealing and tempting each of the options was, how good (i.e., happy and excited) they made one feel, and how happy one would be to receive them as a gift (Cronbach Alpha=.86 for CD/DVD, Cronbach Alpha=.79 for School Supplies). The CD/DVD purchase was considered significantly more pleasurable ($M=5.98$) than the school supplies ($M=4.56$, $t(63)=-6.31$, $p<.0001$). At the same time the CD/DVD option was considered significantly less good for you ($M=3.98$) than the school supplies ($M=5.39$, $t(63)=4.7$, $p<.0001$)⁸. Thus we use the amount of money allocated to the CD/DVD purchase as the main dependent variable for the guilty-pleasure.

Self-Control. The average pleasure score of the CD/DVD option was the only significant covariate for this analysis. We find a significant main effect of Mood on indulgence ($F(2,60)=5.81$, $p<.005$). Planned contrasts revealed that participants in the guilty condition indulged significantly less than both participants in the sad condition (LS Means: $M_{guilty}=25.9$, $M_{sad}=34.84$, $F(1,60)=5.65$, $p<.05$) and in the neutral condition ($M_{neutral}=38.65$, $F(1,60)=11.12$, $p<.05$) by allocating less money to the CD/DVD purchase. There was no significant difference between the neutral and sad participants ($F(1,60)=1.08$, $p>.3$; see fig. 2). If we regress indulgence on guilt level (measured) as a continuous variable, we find that guilt level is significantly negatively related to indulgence level ($b=-4.82$, $t(1,61)=-3.32$, $p<.005$)⁹.

⁸ Results were the same for the complete data set.

⁹ For the complete data set, we find the same significant negative relationship between guilt level and indulgence ($b=-3.22$, $t(1,79)=-2.41$, $p<.05$). We also find a significant main effect of Mood on indulgence ($F(2,78)=3.06$, $p=.05$). As predicted, we find participants in the guilty condition allocated significantly less money to the guilty-pleasure than participants in the neutral condition (LS Means: $M_{neutral}=38.53$, $M_{guilty}=29.6$, $F(1,78)=5.83$,

Insert figure 2 about here

Discussion

In our pretest, consistent with existing literature, we found that cognitions regarding the usefulness of self-control for mood-regulation vary across different negative moods. We found that individuals in a guilty mood believed reducing self-control on a guilty-pleasure would improve mood less than individuals in a sad mood. Thus, manipulating individuals' specific moods served as a natural way to examine the effects of different mood-regulation cognitions. Results show that cognitions (i.e., specific moods) affected self-control choices so that individuals in a guilty mood exerted more self-control on a guilty-pleasure task (by allocating less money to a CD/DVD purchase) as compared to individuals in a sad mood. Moreover, individuals in a guilty mood exerted more self-control than the neutral baseline, showing an absolute increase in self-control in a negative mood.

These findings support the idea that mood-regulation does not simply override self-control. Instead, self-control seems to be recruited to mood-regulation's aid consistent with individuals' cognitions. Thus, although both sad and guilty moods likely engendered a salient mood-regulation goal, they resulted in different self-control levels; these self-control levels were consistent with mood-regulation related cognitions found in each of these moods.

We further examine these ideas in a third study. Two motivations underlie this study. First, the first two studies focused on conceptually similar self-control tasks: guilty-pleasures.

$p < .05$) and marginally less than participants in the sad condition ($M_{sad} = 34.98$, $F(1,78) = 2.55$, $p = .1$). There was no significant difference between the neutral and sad conditions ($F(1,78) = .94$, $p > .3$).

Such tasks involve a tradeoff between an immediate pleasure (e.g., eating a fatty food) and a long-term cost (e.g., being fat or unhealthy; Giner-Sorolla 2001). In our third study we examine a grim-necessity task that involves a tradeoff between an immediate displeasure (e.g., engaging in a boring study task) and a long-term gain (e.g., benefiting a charity; Giner-Sorolla 2001).

Second, in this study we examine whether cognitions vary based on individual characteristics.

Different individuals tend to adopt different coping styles (Morris and Reilly 1987; Thayer et al. 1994) and as a result may deem different self-control levels to be useful for mood-regulation, even on the same task and in the same mood. Measuring individual differences can thus serve as an indirect measure of mood-regulation related cognitions.

STUDY 3

Overview

This study examines the effects of two different negative moods (sad vs. guilty) on a grim-necessity self-control task and also considers the effects of an individual difference variable: guilt-proneness (Tangney et al. 1992). The results demonstrate that the cognitions regarding the usefulness of self-control for mood-regulation vary both for sad versus guilty moods, and for individuals high versus low in guilt-proneness. Consequently, self-control levels differ across these moods in predictable ways, consistent with this individual characteristic.

Theory and Hypotheses

The self-control task in this study involves allotting time to a grim necessity that requires completing an immediate unpleasant task (filling out boring and repetitive questionnaires) in return for the long-term benefit of assisting a charity (Giner-Sorolla 2001).

Cognitions regarding the mood-regulation benefits of participating in such a task are likely to vary among individuals in different negative moods. Specifically, although individuals

in a sad mood may sometimes improve their mood by assisting others (Cialdini, Darby, and Vincent 1973) this mood-improvement potential is erased if the helping task itself is unpleasant (Isen and Simmonds 1978). However, individuals in a guilty mood may have a strong motivation to participate in this grim-necessity task due to their need to provide restitution (Bybee 1998; Bybee, Merisca, and Velasco 1998; Darlington and Macker 1966; Tangney 2001), thus assuaging their guilt and improving their mood.

However, not all individuals in a guilty mood are likely to adopt the same mood-regulation strategy. In particular, individuals who are high in guilt-proneness (Tangney et al. 1992) tend to cope with their guilt quite differently from individuals low in guilt-proneness (Harder 1995; Harder and Lewis 1987; Tangney 2001). When individuals high in guilt-proneness experience acute or salient guilt, they tend to experience resentment and anger (Baumeister, Stillwell, and Heatherton 1994) and cope with guilt via denial or avoidance (Miceli and Castelfranchi 1998; Kubany and Watson 2003). Thus, although automatically inclined to provide restitution, individuals high in guilt-proneness who experience salient, conscious guilt may behave anti-socially (Harder et al. 1992; Kubany and Watson 2003) and cope with their guilt via avoidance (Leventhal and Trembly 1968).

Thus, manipulating individuals' specific mood states and measuring their guilt-proneness may serve as an indirect way to tap into their mood-regulation related cognitions. These cognitions (determined by the interaction between mood and guilt-proneness) should in turn moderate behavior. Hence, when guilt-proneness (GP) is low, guilty participants should exert more self-control on a grim-necessity task for charity than sad participants. However, when GP is high, this pattern should reverse. Additionally, these effects should be driven by an absolute

increase in the self-control of low GP guilty participants, and an absolute decrease in the self-control of high GP guilty participants, as compared to a neutral baseline.

Design and participants

We conducted a 3 (Mood: Sad, Guilty, Neutral) factor between participants design with a continuous measure of Guilt-proneness and a self-control task of grim-necessity for charity. We also included a measure of cognitions as a manipulation check at the end of the study.

Participants were 115 undergraduate students from a southeastern university who participated in return for \$5.

Method

The research was presented to participants as an autobiographical memory study. As in study 2, participants were asked to write a story about a recent event that made them feel either sad or guilty, or tell about a regular, uneventful day. After meditating on the story for two to three minutes, participants completed the “enhanced” PANAS mood scale (Watson et al. 1988).

Participants were then presented with a request (on their computer). They were told that another researcher was conducting an unrelated research effort in an adjacent room. They were told the research involved an array of boring, repetitive tasks designed to assist a charity in formulating its research questionnaires. The other researcher was said to be helping this charity out for free, and thus was unable to pay participants for their time. Participants were asked whether they would be willing to assist the charity. They were told that they did not have to complete the entire charity packet, but could allot anywhere from zero to 20 minutes to the charity (to be carried out after they finished the current study, for no additional pay). Participants were then asked to indicate how much time they wished to allot to the charity (zero to 20 minutes). This served as the grim-necessity self-control dependant variable.

Following this task, participants were presented with three questions: how involved they are with charity, how important charity was to them, and how much time they spent on charity (all on seven-point scales). These questions served as potential covariates. Participants were then asked to indicate what they believed the goal of the study was. Then participants filled out the Test of Self Conscious Affect (TOSCA), designed to measure guilt-proneness (Tangney et al. 1992).

After completing all these tasks, participants in the sad and guilty conditions were asked to respond to several questions regarding the degree to which they believed certain behaviors would make them feel better if they had just experienced the story they recounted earlier. The behaviors were helping a charity, helping less fortunate people, and providing some form of restitution. Participants were also asked whether they felt helping a charity out might help compensate for the events that they had described (all questions on seven-point scales). These questions were designed to evaluate cognitions regarding the usefulness of helping a charity for mood-regulation in different mood states.

Finally, participants completed a funnel debriefing, were advised that there was no real charity task to complete, and were paid for their time.

Results

Three participants were dropped from the study for not following the mood-elicitation procedures and writing stories completely incompatible with the instructions provided. Eleven additional participants were dropped due to hypothesis guessing, which included either drawing

a connection between the mood eliciting story and the charity request or noting disbelief that there was indeed a charity. We report the results below for the remaining 101 participants¹⁰.

Mood Manipulation Check. We created a guilt-score as in study 1 (Cronbach alpha=.86). Separate ANOVAs using the negative mood subscale from the PANAS and our guilt score as dependent variables showed a significant main effect for Mood for both emotion measures. Planned comparisons revealed that participants in the sad and guilty conditions had a significantly higher negative mood score than participants in the neutral condition ($M_{sad} = 1.9$, $M_{neutral} = 1.5$, $F(1,98) = 4.08$, $p < .05$; $M_{guilty} = 2.08$, $F(1,98) = 8.9$, $p < .005$), but were no different from one another ($F(1,98) = 1.08$, $p > .3$). Participants in the guilty condition had a significantly higher guilt score than participants in both the sad ($M_{guilty} = 2.67$, $M_{sad} = 1.80$, $F(1,98) = 16.93$, $p < .0001$) and neutral ($M_{neutral} = 1.59$, $F(1,98) = 26.45$, $p < .0001$) conditions. Participants in the sad and neutral conditions did not significantly differ in their guilt scores ($F(1,98) = 1.09$, $p > .2$).

Manipulation Check for Cognitions. To examine beliefs we created a cognition score comprised of the average on the four measured cognitions for mood improvement (Cronbach alpha=.80). We also calculated an individual guilt-proneness score based on the TOSCA scale (Tangney et al. 1992). We conducted an ANOVA using the cognition score as the dependant variable, and the mood condition, guilt-proneness score, and their interaction as independent variables. We found a significant Mood*Guilt-Proneness interaction ($F(1,46) = 7.13$, $p < .05$)¹¹.

We conducted a median split on the guilt-proneness measure to examine the means and simple effects for the cognitions. As predicted, in the low guilt-proneness condition, participants

¹⁰ Results including all 115 participants are directionally identical, and the central effect of interest (interaction of Mood*Guilt-proneness) is significant. Several planned contrasts are only marginally significant when the full data set is utilized.

¹¹ Only participants from the sad and guilty conditions are included in this analysis (N=65). Due to computer error, cognitions were not recorded for 15 participants; thus only 50 participants are included in the model.

in the guilty mood found the mentioned behaviors to be significantly more useful for mood improvement than participants in the sad condition ($M_{guilty} = 3.8$, $M_{sad} = 2.9$, $F(1,46)=6.72$, $p<.05$). In the high guilt-proneness condition, however, results were reversed. Participants in the guilty mood indicated that the mentioned behaviors were significantly less useful for mood improvement than participants in the sad condition ($M_{guilty} = 3.4$, $M_{sad} = 4.4$, $F(1,46)=6.86$, $p<.05$).

Self-Control. We conducted an ANOVA with the time volunteered for the charity task as the dependent variable. We found a significant Mood*Guilt-Proneness interaction ($F(2,95)=8.39$, $p<.0005$). We conducted planned contrasts to examine the simple effects for the time allotted to charity. A median split was used to examine the means.

As predicted, for individuals low in guilt-proneness, participants in the guilty mood condition volunteered more time to the charity task than those in the both the sad ($M_{guilty-lo} = 13.2$, $M_{sad-lo} = 5.71$, $F(1,95)=18.49$, $p<.0001$) and neutral ($M_{neutral-lo} = 8.75$, $F(1,95)=5.51$, $p<.05$) conditions. Additionally, guilty participants high in guilt-proneness significantly reduced the time allotted to charity when compared to guilty participants low in guilt-proneness ($M_{guilty-hi} = 7.26$, $F(1,95)=8.22$, $p<.005$). Thus, guilty participants high in guilt-proneness allotted significantly less time to the charity than sad ($M_{sad-hi} = 10.78$, $F(1,95)=18.12$, $p<.001$) and neutral ($M_{neutral-hi} = 8.12$, $F(1,95)= 5.38$, $p>.05$) participants (see fig. 3).

 Insert figure 3 about here

Discussion

As expected, different cognitions regarding the utility of self-control for mood-regulation were generated based upon the interaction between participants' mood and guilt-proneness. The main prediction, that mood and guilt-proneness (a proxy for cognitions) would interact to determine self-control behaviors, was also supported. Participants low in GP showed higher self-control (volunteered more time) on the grim-necessity for charity in a guilty mood than in a sad mood. Participants high in GP showed an opposite pattern. Moreover, guilty participants low in GP increased self-control in an absolute sense, and guilty participants high in GP decreased self-control in an absolute sense.

These findings demonstrate once again that self-control is strategically used in the service of mood-regulation goals, and that self-control related cognitions serve a key role in this strategic relationship. The perceived strategic utility of self-control for mood-regulation varies not only across and within moods (as shown in studies 1 and 2), but also based on individual characteristics.

GENERAL DISCUSSION

This research demonstrates the implications of a nuanced strategic model linking mood-regulation to self-control. It also demonstrates the key role that mood-regulation cognitions play in determining self-control choices in negative moods. In study one, individuals' mood-regulation goal salience and mood-regulation related beliefs were independently manipulated. In a neutral mood, when mood-regulation goals were not salient, behavior was not affected by the manipulated cognitions; however, in a sad mood, when mood-regulation goals were salient, behavior was congruent with these cognitions. Thus, active mood-regulation goals seemed to "recruit" self-control behaviors to their service. Moreover, due to this strategic relationship, negative moods led to an absolute *increase* in self-control.

In study two these findings were extended by comparing two different negative moods (i.e., sad vs. guilty) and examining naturally varying cognitions. A pretest established that cognitions regarding the usefulness of self-control for mood-regulation were different in a sad versus guilty mood. Participants in a guilty mood believed indulging was a less effective strategy for mood-regulation than participants in a sad mood.

Thus, eliciting these different mood states served as an indirect manipulation of mood-regulation related cognitions. Results showed that self-control levels were consistent with these naturally occurring cognitions, confirming once again the key role of mood-regulation related cognitions in determining self-control choices in negative moods.

The results of study three demonstrate further that such cognitions vary not only across specific negative mood types, but also based on individual mood-coping characteristics. Consistent with existing literature, cognitions regarding the usefulness of self-control for mood-regulation varied depending on both the specific negative mood induced and individual guilt-proneness. The interaction of mood and guilt-proneness determined self-control behavior.

In sum, these findings demonstrate a strategic link between mood-regulation goals and self-control behaviors, whereby self-control is “recruited” to mood-regulation’s aid. Thus, self-control levels vary based not on mood valence alone but rather based on: (1) the salience of a mood-regulation goal, and (2) cognitions regarding the utility of self-control for mood-regulation that vary across moods and individuals. As a result of these factors, self-control increases in negative moods under some conditions.

These findings are important for consumer research in several ways. First, it is important to recognize that mood-regulation is a central and primary goal (Erber 1996; Morris and Reilly 1987) and thus likely to affect consumer choice in many ways. This paper begins to examine one

of the avenues by which mood-regulation goals may affect consumption, in particular of indulgence goods. Mood-regulation may also affect other consumption decisions. For example, the presence of a mood-regulation goal may override other goals, such as budget management, or it may shorten the decision process (as consumers aim to swiftly improve their mood), thereby affecting processing strategies and eventual preferences.

Second, these findings provide insight into some of the conditions under which consumers fail or succeed at self-control. Since consumer self-control is at the heart of so many social problems, such an understanding is critically important. In particular, the strategic model presented here might provide some guidance on how to help consumers make better decisions. Knowing that mood-regulation goals sometimes drive self-control behaviors, consumers may be able to recognize when they are indulging for mood-regulation reasons and attempt to choose healthier, more fruitful mood-regulation strategies. This is particularly true if consumers invest the time and effort to learn better mood-regulation habits. Alternatively, rather than altering their mood-regulation habits, consumers may simply learn to shift their focus to cognitions or feelings that might lead them to pause before overeating, overspending or generally relinquishing self-control.

Moreover, these findings open the door for an interesting discussion of consumer agency and self-control. Some current views portray consumers as having little power regarding their self-control decisions (e.g., Baumeister et al. 1998). Certainly, there are circumstances under which individuals are *unable* to exert self-control. However, most consumer decisions involve situations where individuals are not powerless; “The vast majority of impulses are resistible” (Baumeister and Heatherton 1996, p.6). Does the strategic model shown here place the power of self-control back in the hands of consumers?

At first glance, it appears so. The present theory views consumers as able to strategically choose their self-control levels in accordance with their mood-regulation needs and beliefs. As a result, even in negative moods consumers are often quite successful at exerting self-control. However, on deeper examination, empowerment may be partial at best. Specifically, there is no evidence in any of the study protocols that consumers are aware that they are making strategic self-control choices. Although consumers seem to behave consistently with their mood-regulation goals and beliefs, it is not clear whether they are considering them consciously. It is possible that if consumers have enacted certain self-control strategies repeatedly over time, they automatically engage in these strategies whenever a negative mood is encountered (Bargh and Chartrand 1999).

Two interesting implications arise if one believes strategies can be applied automatically. On the positive side, individuals may sometimes exert self-control with little effort, potentially leaving more resources for other, more effortful decisions, or subsequent self-control needs. On the negative side, if some instances of relinquishing self-control are automatic and learned, extra resources may be required to overcome or unlearn them.

The idea of automatic activation of mood-regulation strategies raises another question. Must the mood be as strong and salient as in the studies presented here in order to exert its effects? Or will the emotion-behavior link be activated even if the mood elicitation is more subtle, and the mood experience less consciously available (Berridge and Winkielman 2003)? Moreover, given a more subtle emotional experience, would one expect behavior to be identical to that observed when mood was salient (Murphy and Zajonc 1993)? For example, participants high in guilt-proneness were automatically inclined towards restitution; however, the strong experience of guilt caused them to adopt avoidant, anti-social behaviors that reduced self-control.

How would individuals high in guilt-proneness behave if the experience of guilt were weaker or less consciously available? These are all interesting questions for future research.

Additional future research might focus on how positive moods might fit into this strategic self-control model. What are the strategies consumers utilize for positive mood maintenance? How do positive moods affect self-control purchases or decisions? Another interesting avenue for research may be the degree to which mood-regulation goals and self-control strategies can be elicited by marketers. In our research, we placed participants in a given mood via autobiographical stories. Can marketers elicit similar mood states via simpler means such as music, images, or other advertising and communication content? Are the effects of mood elicited by these means the same as the ones observed in this research? Can marketers link products to mood-regulation goals? All of these are interesting extensions of the present theory that would allow a better understanding of consumer self-control decisions and behaviors, many of which are central to the health of our society.

REFERENCES

- Adaval, Rashmi (2003), "How Good Gets Better and Bad Gets Worse: Understanding the Impact of Affect on Evaluations of Known Brands," *Journal of Consumer Research*, 30 (3), 352-367.
- Ariely, Dan, and Klaus Wertenbroch (2002), "Procrastination, Deadlines, and Performance: Self-Control by Precommitment," *Psychological Science*, 13 (3), 219-224.
- Bandura, Albert, and Dale H. Schunk (1981), "Cultivating Competence, Self-Efficacy, and Intrinsic Interest Through Proximal Self Motivation," *Journal of Personality and Social Psychology*, 41 (3), 586-598.
- Bargh, John A., and Tanya L. Chartrand (1999), "The Unbearable Automaticity of Being," *American Psychologist*, 54 (7), 462-479.
- Baumeister, Roy F. (1997), "Esteem Threat, Self-Regulatory Breakdown, and Emotional Distress as Factors in Self-Defeating Behavior," *Review of General Psychology*, 1 (2), 145-174.
- Baumeister, Roy F., Ellen Bratslavsky, Mark Muraven, and Dianne M. Tice (1998), "Ego Depletion : Is the Active Self a Limited Resource?," *Journal of Personality and Social Psychology*, 74 (5), 1252-1265.
- Baumeister, Roy F., and Todd E. Heatherton (1996), "Self Regulation Failure: Past, Present and Future," *Psychological Inquiry*, 7 (1), 90-98.
- Baumeister, Roy F., Todd E. Heatherton, and Dianne M. Tice (1994), "*Losing Control: How and Why People Fail at Self-Regulation*," San Diego, CA, Academic Press.

- Baumeister, Roy F., Harry T. Reis, and Phillippe Delespaul (1994), "Subjective and Experiential Correlates of Guilt in Everyday Life," *Personality and Social Psychology Bulletin*, 21 (12), 1256-1268.
- Baumeister, Roy F., Arlene M. Stillwell, and Todd F. Heatherton (1994), "Guilt: An Interpersonal Approach," *Psychological Bulletin*, 115 (2), 243-267.
- Berridge, Kent C., and Piotr Winkielman (2003), "What is an Unconscious Emotion? (The Case for Unconscious "Liking")," *Cognition and Emotion*, 17 (2), 181-211.
- Brendl, Miguel C., Tory E. Higgins, and Kristi M. Lemm (1995), "Sensitivity to Varying Gains and Losses: The Role of Self- Discrepancies and Event Framing," *Journal of Personality and Social Psychology*, 69 (6), 1028-1051.
- Bybee, Jane (1998), *Guilt and Children*, San Diego: CA, Academic Press, Inc.
- Bybee, Jane, Rolande Merisca, and Rashid Velasco (1998), "The Development of Reactions to Guilt-Producing Events," in *Guilt and children*, ed. Jane Bybee, San Diego, CA: Academic Press, 185-213.
- Carver, Charles S., and Michael F. Scheier (1998), *On the Self-Regulation of Behavior*, New York: Cambridge University Press.
- Carveth, Donald L. (2001), "The Unconscious Need for Punishment: Expression or Evasion of the Sense of Guilt?," *Psychoanalytical Studies*, 3 (1), 9-21.
- Catanzaro, Salvatore J., and Jack Mearns (1990), "Measuring Generalized Expectancies for Negative Mood Regulation: Initial Scale Development and Implications," *Journal of Personality Assessment*, 54 (3-4), 546-563.

- Cialdini, Robert B., Betty Lee Darby, and Joyce E. Vincent (1973), "Transgression and Altruism: A Case for Hedonism," *Journal of Experimental Social Psychology*, 9 (6), 502-516.
- Dale, Karen L., and Roy F. Baumeister (1999), "Self-Regulation and Psychopathology," in *The Social Psychology of Emotional and Behavioral Problems: Interfaces of Social and Clinical Psychology*, ed. Robin M. Kowalski and Mark R. Leary, Washington, DC: American Psychological Association, 139-166.
- Darlington, Richard B., and Clifford E. Macker (1966), "Displacement of Guilt-Produced Altruistic Behavior," *Journal of Personality and Social Psychology*, 4 (4), 442-443.
- Dhar, Ravi, and Klaus Wertenbroch (2000), "Consumer Choice Between Hedonic and Utilitarian Goods," *Journal of Marketing Research*, 37 (1), 60-71.
- Erber, Ralph (1996), "The Self-Regulation of Moods," in *Striving and Feeling: Interactions Among Goals, Affect, and Self-Regulation*, ed. Leonard L. Martin and Abraham Tesser, Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 251-275.
- Escalas, Jennifer E., and Barbara B. Stern (2003), "Sympathy and Empathy: Emotional Responses to Advertising Dramas," *Journal of Consumer Research*, 29 (4), 566-578.
- Estrada-Hollenbeck, Mica, and Todd F. Heatherton (1998), "Avoiding and Alleviating Guilt Through Prosocial Behavior," in *Guilt and Children*, ed. Jane Bybee, San Diego, California: Academic Press, 215-231.
- Forster, Jean. L., and Robert W. Jeffery (1986), "Gender Differences Related to Weight History, Eating Patterns, Efficacy Expectations, Self-Esteem, and Weight Loss

Among Participants in a Weight Reduction Program,” *Addictive Behaviors*, 11 (2), 141-147

Franzoi, Stephen L., and Stephanie Shields (1984), “The Body Esteem Scale: Multidimensional Structure and Sex Differences in a College Population,” *Journal of Personality Assessment*, 48 (2), 173-178.

Giner-Sorolla, Roger (2001), “Guilty Pleasures and Grim Necessities: Affective Attitudes in Dilemmas of Self Control,” *Journal of Personality and Social Psychology*, 80 (2), 206-221.

Greeno, Catherine G., and Rena R. Wing (1994), “Stress Induced Eating,” *Psychological Bulletin*, 115 (3), 444-464.

Harder, David W. (1995), “Shame and Guilt Assessment and the Relationship of Shame and Guilt Proneness to Psychopathology,” in *Self Conscious Emotions: Shame, Guilt, Embarrassment, and Pride*, ed. June P. Tangney and Kurt W. Fisher, New York, NY: Guilford press, 368-392.

Harder, David W., Lisa Cutler, and Liesl Rockart (1992), “Assessment of Shame and Guilt and Their Relationships to Psychopathology,” *Journal of Personality Assessment*, 59 (3), 684-604.

Harder, David W., and Suzan J. Lewis (1987), “The Assessment of Shame and Guilt,” in *Advances in Personality Assessment*, Vol. 6, ed. James N. Butcher and Charles D. Spielberger, Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 89-114.

Herman, Peter C., and Janet Polivy (1975), “Anxiety, Restraint and Eating Behavior,” *Journal of Abnormal Psychology*, 84 (6), 666-672.

Hoffman, Martin L. (1998), "Varieties of Empathy Based Guilt," in *Guilt and Children*, ed.

Jane Bybee, San Diego, California: Academic Press, 91-112.

Isen, Alice M., and Stanley F. Simmonds (1978), "The Effect of Feeling Good on a Helping

Task that is Incompatible With Good Mood," *Social Psychology*, 41 (4), 346-349.

Keller, Punam A., and Lauren G. Block (1995), "Increasing the Persuasiveness of Fear

Appeals: The Effect of Arousal and Elaboration," *Journal of Consumer Research*,

22 (4), 448-459.

Kubany, Edward S., and Susan B. Watson (2003), "Guilt: Elaboration of a Multidimensional

Model," *The Psychological Record*, 53, 51-90.

Larsen, Randy J. (2000), "Toward a Science of Mood Regulation," *Psychological Inquiry*, 11

(3), 129-141.

Leith, Karen P., and Roy F. Baumeister (1996), "Why Do Bad Moods Increase Self-Defeating

Behavior? Emotion, Risk Tasking, and Self-Regulation," *Journal of Personality*

and Social Psychology, 71 (6), 1250-1267.

Lerner, Jennifer S., and Dacher Keltner (2000), "Beyond Valence: Toward a Model of

Emotion-Specific Influences on Judgment and Choice," *Cognition and Emotion*,

14 (4), 473-493.

Leventhal, Howard, and Trembly G. (1968), "Negative Emotions and Persuasion," *Journal of*

Personality, 36 (1), 154-168.

Luce, Mary F. (1998), "Choosing to Avoid: Coping with Negatively Emotion-Laden Consumer

Decisions," *Journal of Consumer Research*. 24 (4), 409-433.

- Luomala, Harri T., and Martti Laaksonen (1999), "A Qualitative Exploration of Mood-Regulatory Self-Gift Behaviors," *Journal of Economic Psychology*, 20 (2), 47-182.
- Martz, Denise M., Ellie T. Sturgis, and Sigrid B. Gustafson (1996), "Development and Preliminary Validation of the Cognitive Behavioral Dieting Scale," *International Journal of Eating Disorders*, 19 (3), 297-309.
- Miceli, Maria, and Cristiano Castelfranchi (1998), "How to Silence One's Conscience: Cognitive Defenses Against the Feeling of Guilt," *Journal for the Theory of Social Behaviour*, 28 (3), 287-318.
- Mick, David G., and Michelle DeMoss (1990), "Self-gifts: Phenomenological Insights From Four Contexts," *Journal of Consumer Research*, 17 (3), 322-332.
- Morris, William N., and Nora P. Reilly (1987), "Toward the Self Regulation of Mood: Theory and Research," *Motivation and Emotion*, 11 (3), 215-249.
- Murphy, Sheila T., and R. B. Zajonc (1993), "Affect, Cognition, and Awareness: Affective Priming With Optimal and Suboptimal Stimulus Exposures," *Journal of Personality and Social Psychology*, 64 (5), 723-739.
- Nisbett, Richard E. (1972), "Hunger, Obesity and the Ventromedial Hypothalamus," *Psychological Review*, 79 (6), 433-453.
- O'Guinn, Thomas C., and Ronald J. Faber (1989), "Compulsive Buying: A Phenomenological Exploration," *Journal of Consumer Research*, 16 (2), 147-157.
- Pham, Michael T., Joel B. Cohen, John W. Pracejus, and David G. Hughes (2001), "Affect Monitoring and the Primacy of Feelings in Judgment," *Journal of Consumer Research*, 28 (2), 167-188.

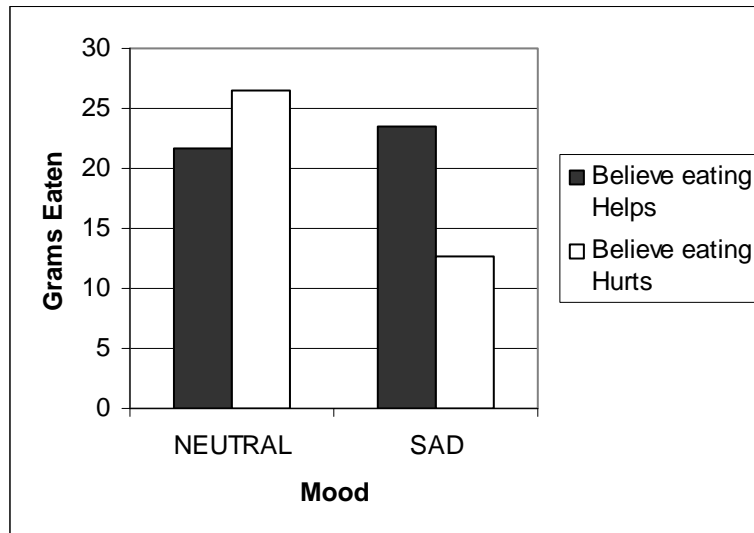
- Puri, Radhika (1996), "Measuring and Modifying Consumer Impulsiveness: A Cost-Benefit Accessibility Framework," *Journal of Consumer Psychology*, 5 (2) 87-113.
- Rehm, Lynn P., and Paul Plakosh (1975), "Preference for Immediate Reinforcement in Depression," *Journal of Behavior Therapy and Experimental Psychiatry*, 6 (2), 101-103.
- Seeman, Gloria J., and Conrad Schwarz (1974), "Affective State and Preference for Immediate Versus Delayed Reward," *Journal of Research in Personality*, 7 (4), 384-394.
- Shiv, Baba, and Alexander Fedorikhin (1999), "Heart and Mind in Conflict: The Interplay of Affect and Cognition in Consumer Decision Making," *Journal of Consumer Research*, 26 (3), 278-292.
- Tangney, June P. (2001), "Constructive and Destructive Aspects of Shame and Guilt," in *Constructive and Destructive Behavior: Implications for Family, School, and Society*, ed. Arthur C. Bohart and Deborah J. Stipek, Washington, DC: American Psychological Association, 127-145.
- Tangney, June P., and Roy F. Baumeister (2001), "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," unpublished manuscript, Department of Psychology, George Mason University, Fairfax, VA.
- Tangney, June P., and Ronda L. Dearing (2002), *Shame and Guilt*, New York, NY: Guilford Press.
- Tangney, June P., Patricia Wagner, and Richard Gramzow (1992), "Proneness to Shame Proneness to Guilt and Psychopathology," *Journal of Abnormal Psychology*, 101 (3), 469-478.

- Thayer, Robert E., Robert Newman, and Tracy M. McClain (1994), "Self Regulation of Mood: Strategies for Changing A Bad Mood, Raising Energy, and Reducing Tension," *Journal of Personality and Social Psychology*, 67 (5), 910-925.
- Tice, Dianne M., Ellen Bratslavsky, and Roy F. Baumeister (2001), "Emotional Distress Regulation Takes Precedence Over Impulse Control: If You Feel Bad Do It!," *Journal of Personality and Social Psychology*, 80 (1), 53-67.
- Wansink, Brian (1994), "Antecedents and Mediators of Eating Bouts," *Family & Consumer Sciences Research Journal*, 23 (2), 166-182.
- Watson, David, Lee A. Clark, and Auke Tellegen (1988), "Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales," *Journal of Personality and Social Psychology*, 54 (6), 1063-1070.
- Wenzlaff, Richard M., Daniel M. Wegener, and David W. Roper (1988), "Depression and Mental Control: The Resurgence of Unwanted Negative Thoughts," *Journal of Personality and Social Psychology*, 55 (6), 882-892.
- Williams, Patti, and Jennifer L. Aaker (2002), "Can Mixed Emotions Peacefully Coexist?," *Journal of Consumer Research*, 28 (4), 636-649.
- Wilson, Timothy. D., Daniel Gilbert, and David B. Centerbar (2003), "Making Sense: The Causes of Emotional Evanescence," in *The Psychology of Economic Decisions*, Vol. 1, ed. Isabell Brocas and Juan D. Carrillo, New York, NY: Oxford University Press, 209-233.

TABLE 1
PRETEST RESULTS: MOOD-REGULATION COGNITIONS ACCOMPANYING SAD
VERSUS GUILTY MOODS

COGNITION	MOOD		P-VALUE
	SAD	GUILTY	
Pampering myself makes me feel better	4.3	2.9	<i>p</i> <.05
Indulging in a favorite food such as ice cream or chocolate makes me feel better	4.4	3.1	<i>p</i> <.05
Going to a nice restaurant makes me feel better	3.6	2.8	<i>p</i> <.05

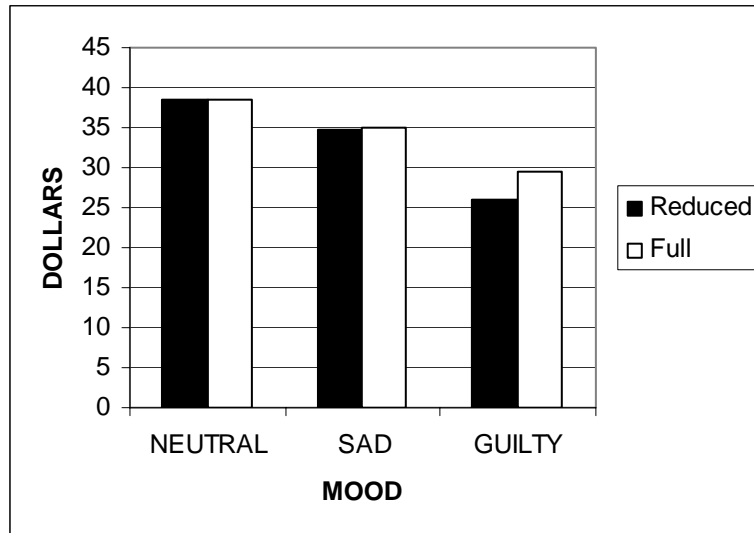
* 1-7 Likert scale, Strongly Disagree=1, Strongly Agree=7.

FIGURE 1**STUDY 1 – RESULTS: BELIEF BY MOOD**

*Graph depicts LS Means

* *Lower scores (i.e., less grams eaten) reflect higher levels of self-control

FIGURE 2
STUDY 2 – SELF-CONTROL BY MOOD

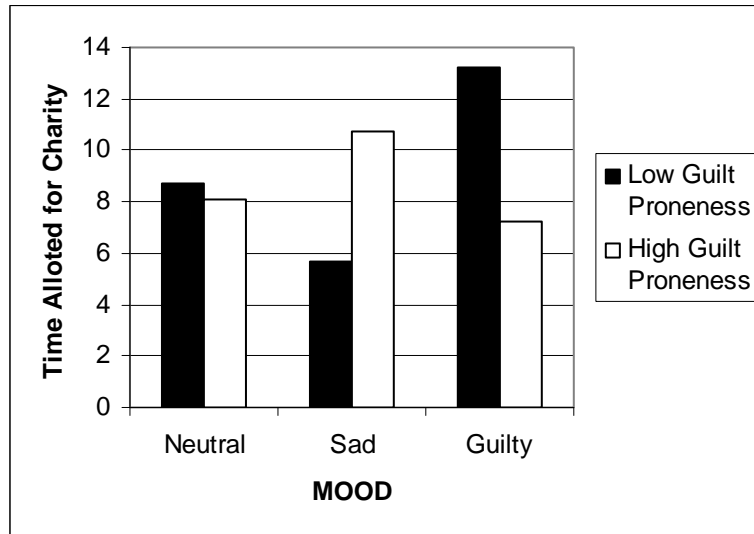


*Graph depicts LS Means

* *Lower dollars allotted mean more self-control

FIGURE 3

STUDY 3 – SELF-CONTROL BY MOOD AND GUILT-PRONENESS



*Guilt-proneness scores divided according to a median split for presentational purposes.

** More time allotted to charity means higher self-control.