USING YOUR IMAGINATION TO PURSUE GOALS: DIMINISHING

THE EFFECTS OF VISCERAL TEMPTATIONS

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Consumers consistently set goals for themselves. Despite good intentions, consumers often deviate from their goals. If consumers understand the benefits that arise from goal success, then why do most consumers fail to accomplish goals? Often, temptations are more appealing than achievement of goals; temptations are tangible while the benefits of a goal are difficult to grasp. An individual who uses his/her imagination to visualize goal success makes the goal more present-minded and attainable (Oettingen 2000). Thus, imagination facilitates self-efficacy, the belief in one’s ability to reach a goal. Higher self-efficacy, then, provides an individual with the willpower to achieve a goal (Taylor, Pham, Rivkin, and Armor 1998). Whereas previous work has examined temptations’ relationship with goals (e.g. Fedorikhin and Patrick 2010; Wilcox, Vallen, Block, and Fitzsimons 2009; Zhang, Huang, and Broniarczyk 2010; etc.), the scope of this dissertation study differs. Rather, the research aim is to identify how consumers can overcome visceral temptations. Thus, the main objectives include: contributing new perspectives on goal research by merging the literatures on imagination and visceral cues, outlining how imagination regulates the impact of visceral temptations, and identifying the underlying mechanism that explains how imagination regulates the relationship between visceral cues and ad-evoked thoughts, through self-efficacy.
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Chapter 1 – Introduction

The traditional decision-making model suggests consumers rationally continue through five stages in a decision, consisting of problem recognition, information search, alternative evaluation, purchase decision, and post-purchase evaluation. Accordingly, decision-making consists of three components: cognitive, affective, and conative portions (Mowen and Minor 2006). While the cognitive component relates to thoughts, beliefs, and ideas, the affective dimension drives feelings and emotions. Finally, conative is behavioral disposition of the individual. Several theories on decision-making, such as the Elaboration Likelihood Model (Petty and Cacioppo 1986), suggest cognitions are a primary component of a decision. However, some consumers make affectively based decisions (Rook and Hoch 1985) and others act without thinking or feeling, but as a reaction to the environment.

In reality, most consumers make sub-par decisions. The Theory of Visceral Influences (TVI), for one, suggests that individuals’ decisions are determined by negative emotions, drive states, and strong feelings. Furthermore, visceral factors in the environment lead individuals to behave against their own self-interests and likewise propel consumers to action without cognitively deliberating. In these cases, cues in the environment cause individuals to pursue actions that deviate from long-term interests (Loewenstein 1996).

Consumers regularly set goals for themselves. Goal setting is consistent with the traditional decision-making model, where cognitive thoughts weigh heavily on decisions (Bettman, Johnson and Payne 1991; Kruglanski 1996). Though, individuals tend to deviate from their goals. Two of the top goals in the United States include losing weight and saving money.
(Duffy 2014). For example, over 35% of all adults are obese (CDC 2014) and the average U.S. household has credit card debt of over $15,000 (Chen, 2014). These statistics reveal challenges for society as a whole, and many wonder whether individuals have control over their temptations to spend money and eat healthy. A recent study suggests about 23% of women were on a diet in 2012, with over 65% of those on a diet for over 6 months. On and off again diets do not work, and researchers suggest women do not tend to remain on diets for longer lengths of time, perhaps due to not seeing results quickly enough (Bahadur 2013).

For those individuals attempting to save money, 27% of Americans have negative savings rates and 40% of adults lack retirement savings plans. Those American households, who have saved money, have less than $4,000 in their savings accounts (Statistic Brain 2014). Some individuals in debt may feel too far removed from their goals to make any significant progress toward saving money. Others may feel more distressed from recent recessions. Given the challenges inherent in savings goals and weight loss goals, it appears that consumers make little progress toward goals because of time perspectives, thinking negatively, and temptations that are contrary to a goal (Lauber 2012).

In all, individuals do experience temptations in many forms. When temptations are more visceral, they experience an even bigger threat to their goals. Visceral temptations are temptations that urge consumers to respond immediately and have a direct, hedonic influence on subsequent behavior (Loewenstein 1996). For instance, some consumer promotional offers use visceral temptations. Promotional advertising is designed to boost the sales of an offering, often in the short-term (Amos and Grau, 2011; Amos and Spears 2010). Consumer-action groups criticize advertisers and marketers for stimulating overconsumption and creating false
demand for products (Scott, Martin, and Schouten 2014). For instance, visceral promotional offers make a reward more vivid, and thus, an individual consumer more susceptible to take advantage of promotional offers. Vivid cues in promotional offers consist of before and after images, time frames, and customer testimonials; vivid visceral cues in promotional offers enhance attitudes toward a brand, attitudes toward an offer, attitudes toward the advertisement, and purchase intentions (Amos and Spears 2010).

In many promotional offers, such as a sale, time limits propel consumers to immediate action (“For a limited time only.”) and often specify a date in the near future that the promotional offer expires. In weight loss advertisements, promotional offers designed to tempt consumers to take an easier yet riskier method to weight loss goals, 65% use consumers testimonials and 42% use before and after photos (FTC 2002).

Despite visceral temptations, Loewenstein (1996) suggests there are instances where individuals are less susceptible to visceral influences and can overcome visceral temptations. First, individuals can enhance their willpower enough to prevail over visceral temptations when they vividly imagine positive consequences of a desired behavior or the negative consequences of failure to achieve a desired behavior (Loewenstein 1996). Second, intervention is possible through priming, where an individual strategically diverts attention away from visceral cues in the environment. Though priming is a short-term technique, learning leads to a more permanent change. As the third technique, learning occurs when visceral stimuli activate thinking about relevant goals, making individuals less prone to react to visceral stimuli. Finally, enhancing self-efficacy makes an individual less responsive to visceral influences (Mischel and Metcalfe 1999).
Although Loewenstein (1996) suggests vividly imagining either the positive futures of a desired behavior or the negative consequences of failure leads to enhanced willpower, Oettingen (2000) argues that imagining both, not just one or the other, leads to increased goal success. There has been little research to investigate through which conditions visceral temptations are less impactful on consumer behavior, and which underlying mechanism explains the effect. This gap has served as the impetus for this research, with the research questions following.

**Research Questions**

Because certain advertising cues lead to individuals’ suboptimal decision-making, cues in advertising can impact on goal-related behavior. However, individuals are not always vulnerable to the influences from advertisements. In fact, when advertisements include more visceral cues, individuals are more susceptible to take advantage of such an advertisement (Amos and Grau 2011; Amos and Spears 2010). It is the purpose of this research to investigate how this behavior can be reversed. Reversing the effects from temptations would have a profound impact on an individual’s success in achieving their goals. That is, this research study is designed to examine under which conditions the effects from visceral influences can be dampened. According to Loewenstein (1996) and Mischel and Metcalfe (1999), heightened self-efficacy can dampen the effect of visceral cues. Additionally, the imagination goal-regulation literature finds the imagination helpful in maintaining progress toward long-term goals, through higher degrees of self-efficacy (Oettingen 2000). Therefore, this dissertation explores moderators (imagination regulation) and mediators (self-efficacy) of visceral cues on ad-related
thoughts, using the TVI and imagination goal-regulation. Chapter 2 will discuss the differences between imagination regulation and self-efficacy, and their relationships. Consequently, the main research questions are:

1. How does the imagination moderate the effect of goal-incongruent visceral temptations on ad-related thoughts?
2. How does the imagination moderate the effect of goal-congruent visceral temptations on ad-related thoughts?
3. Does self-efficacy mediate the relationship between the interaction of imagination thought type and visceral temptations and ad-related thoughts?
4. When including self-efficacy as a moderator, how does the relationship between the interaction of imagination thought type and visceral temptations impact attitudes?

**Research Goals**

The dissertation uses TVI to guide the hypotheses, as TVI explains why individuals deviate from goals and individuals lack self-control, despite strong intentions to pursue their goals. TVI explains discrepancies between intentions and actual behavior (Loewenstein 1996). The study will contribute to TVI by connecting real time visceral influences and imagined future outcomes. Furthermore, the dissertation addresses the call from recent literature to identify mechanisms that dampen the effect of temptations on goal progress (e.g. see van Osselaer and Janiszewski 2012). By studying the relationships amongst visceral influences, the imagination, and self-efficacy, the average person will be more prepared to set and work towards goals. The
study will use 6 experimental designs to examine the effect of promotional advertisements on individuals who use their imaginations to self-regulate while in the pursuit of a goal.

This dissertation has four main goals. First, the dissertation draws upon imagination literature to identify how imagination moderates the impact of visceral cue to commitment to long-term goals, addressing Research Questions 1 and 2 via the first five experimental designs. The first study examines the main effects from imagination regulation on ad-related thoughts incongruent with a goal, while studies two and three assess main effects from imagination regulation on ad-related thoughts congruent with a goal. The fourth experiment takes study 1 a step further, and assesses the moderating impact of imagination on the relationship between visceral cues and ad-related thoughts using a goal-inconsistent advertising context. The fifth experiment is similar to the fourth and extends the findings from study 3, focusing on a goal-consistent advertising context. Second, the dissertation seeks to examine how self-efficacy mediates goal regulation in the face of visceral influences, responding to Research Question 3. While the fifth experiment examines the mediating role of self-efficacy through a measured variable, the sixth experiment manipulates self-efficacy in the experimental design to bolsters the confidence of the mediating effect, in response to Research Question 4. Third, theoretically, the research will establish a connection between goal regulation and the theory of visceral influences. Finally, the dissertation provides results and conclusions for practitioners, public policy-makers, and academicians.
Research Design

The research design portion of the dissertation provides an opportunity for expanding the theoretical understanding of the Theory of Visceral Influences (TVI) as well as establishes a connection between imagination goal regulation and the hot and cold systems of the TVI. First, this study conducts a focus group and several simple experiments to assess temptations to goal progress, establish manipulations and conditions appropriate for the main studies, and identifies a main effect of imagination on attitudes toward ad-related temptations. Six experiments are conducted to assess consumers’ responses to ad-related visceral temptations. The fourth study responds to the first research question, assessing how the imagination moderates goal-incongruent visceral temptations. Both the fifth and sixth experiments examine the imagination’s moderation of goal-congruent visceral temptations, responding to research question two. The fifth and sixth experiments both respond to the third research question, examining the impact from self-efficacy on the interaction of visceral cues and imagination thought type on attitudes toward a temptation. While the fifth experiment treats self-efficacy as a measured mediating variable, the sixth experiment manipulates self-efficacy and provides stronger evidence for the impact of self-efficacy on goal-related visceral temptations on ad evaluations.

Managerial and Academic Contributions

The dissertation makes several contributions to theory and practice, including an empirical assessment of intervention when a promotional advertisement triggers a visceral
state, and the establishment of self-efficacy as the underlying mechanism responsible for the intervention. Each contribution is discussed in more detail in the following sections.

**Theoretical Contributions**

Prior literature has established that visceral influences have a direct, hedonic impact on immediate behavior via heightened emotions, overriding cognitive deliberations (Amos and Spears 2010; Loewenstein 1996; Mischel and Metcalfe 1999). Furthermore, higher levels of visceral intensity increase the drive state of the individual, prompting consumers toward reward-oriented behavior (Loewenstein 1996). Visceral influences present in promotional advertisements lead consumers to behave contrary to their best interests (Amos and Grau 2011; Amos and Spears 2010). A sufficient gap in the literature exists, which empirically connects goal regulation and the theory of visceral influences. This research does just that, suggesting that individuals, provided with sufficient resources for goal regulation, can prevail over visceral temptations and have reduced susceptibility to visceral influences. This dissertation makes a theoretical contribution by providing contributing new perspectives on goal research.

For academics, the experiments suggest expansion of TVI to include imagination as a goal regulation mechanism, capable of decreasing consumer vulnerability to visceral influences. The results have implications for academics across a range of disciplines, including marketing, psychology, sociology, advertising, and public policy.


**Public Policy Implications**

For marketing and public policy practitioners, TVI provides evidence that certain individuals are more vulnerable to visceral cues in promotional advertisements (e.g. younger and those who work more stressful jobs) [Loewenstein 1996]. Because certain groups are more vulnerable to visceral influences, there are several ethical issues raised by the results. First, should public policy regulate the use of certain visceral cues in advertisements, especially those directed to more vulnerable populations (e.g. the elderly, the chronically stressed, etc.)? Second, what is the role of government in helping these more vulnerable groups use their imaginations to set long-term goals?

Most consumers do not make progress toward the goals they set for themselves due to temptations, unrealistic expectations, and failure to create new behavioral patterns. In fact, in America, we have substantial health and wellness issues, such as obesity and financial debt. Visceral cues do determine individual actions in several contexts, including the health and wellness industry. In addition to 35% of all U.S. adults who are obese, additionally, over 30% of adult Americans qualify as overweight. Obesity claims an estimated 300,000 deaths per year (U.S. Surgeon General 2010), and is correlated with several cancers and diseases (CDC 2014). All consumers struggle to resist unhealthful food temptations. Yet those who are obese and overweight are more vulnerable to food temptations, and less likely to maintain weight loss goals (Crescioni et al., 2011).

Those in public policy domains are increasingly interested in strategies to rectify the growing overweight population within the United States. Simply using better nutrition labeling does not help these more vulnerable groups (Hassan, Shiu, and Michaelidou 2010). By targeting
vulnerable consumers, marketers can use visceral cues consistent with long-term well-being to help consumers achieve goals. In other words, more vulnerable individuals may respond to goal-consistent marketing efforts, such as using more vivid images that represent how the nutritional and fat content of food (Koenigstorfer, Groeppel-Klein, and Kamm, 2014). For instance, instead of stating percentages or grams, which are incomprehensible for some consumers, mandates can integrate vivid symbols with food labels, such as color coded fat content (e.g. where green signifies a healthy choice, yellow would mean borderline, and red would symbolize completely unhealthy).

In addition to the growing obesity epidemic, there is also an issue of outstanding consumer debt. Credit card debt is the top form of revolving debt, with 72% of U.S. consumers holding credit cards (Meijer et al. 2011). In total, U.S. credit card holders paid over $94 billion in interest alone in 2009 (Meijer et al. 2011). Those more vulnerable to credit card interest, with many credit cards charging over 20% APR, are those who pay at or close to the minimum payment each month and payment frequency. As opposed to higher income groups and upper social classes that use credit cards for convenience motives, lower income groups and the poorer social classes use credit cards as installment purchases (Yi-Wen and DeVaney 2001).

Public policy makers should consider segmentation approaches to regulation, whereby they identify the most vulnerable populations for obesity and credit card debt and develop regulatory approaches that use visceral cues to de-market tempting products to these more vulnerable groups. For instance, those with low credit scores may be at risk for signing up for additional credit cards and are vulnerable to even higher APR rates than those who have better credit scores. Before allowing credit card companies to issue these consumer groups more
credit, additional regulations may require testimonial warnings, vivid facts and figures about
the effects of added credit, and the use of certain colors to make signing up for these additional
credit cards less appealing.

Furthermore, the U.S. government can implement approaches teaching consumers to
use their imaginations to overcome temptations, such as credit card usage or unhealthful
foods. According to the CDC’s division of Nutrition, Physical Activity, and Obesity, early care and
education (ECE) is critical to combat obesity, via prevention strategies targeting young children
(CDC 2013). As part of this program, local governments and local schools may consider
educating younger children how to deal with temptations. In addition to existing educational
programs in schools, teachers can help young students understand and use the imagination to
pursue longer-term goals.

**Pro-Social Marketing Implications**

Pro-social marketers are interested in creating communication tools to help consumers
make better decisions (Dickson and Holmes 2008). Educational campaigns helping consumers
to better manage their physical health and financial health may direct consumers to more long-
term benefits. In fact, social marketing efforts coupled with regulatory policy has been
particularly effective in motivating more positive consumer behavior (Hogan, Perks, and
Russell-Bennett 2014). Educational efforts can help individuals realize their goals by
encouraging consumers to change their behaviors through imagining their goals. Consumers
have many different goals, from spending more time with family members to learning a
different language, and often multiple goals. Social marketing strategies can be implemented to
demonstrate that imagining can facilitate goal regulation. Personal salesmen use these strategies often. For instance, a car salesman will ask the potential buyer to picture a future with the car, and how the potential buyer can satisfy his or her goals by purchasing a particular car. The same principles can be applied to social marketing efforts directed toward consumer goals.

Marketers can identify a goal or several goals that are positive and relevant for their target market. Through promotional campaigns, the marketer may outline these goals, and simultaneously provide instances of what success would look like, what the temptations are, and finally, how the marketer is the solution to achieving the goal. Since goals can be manipulated, marketers can even stimulate consumer action by providing consumers with certain goals and following those goals up with imagination regulation. This type of promotional campaign would include such efforts as events, blogging, and smart phone devices (Hogan et al. 2014). Events would bring consumers together to teach them how they can be more effectual in pursuing their goals—through the imagination. Blogging would allow consumers across the world to gain insight into the same strategies. Furthermore, smart phones would reach younger populations and help consumers similarly. For instance, Lumosity, and other brain-training smart phone applications, have been created to improve individuals’ memory, problem-solving skills, and information processing (Popescu 2012). Other applications help individuals learn Spanish, or another foreign language. Therefore, interactive yet fun techniques can be designed to help consumers activate their imagination to problem solve and pursue goals.
Dissertation Overview

This dissertation is organized, as follows. Chapter 2 provides the impetus for the research questions, as well as reviews the literatures on TVI and imagination goal regulation. Additionally, Chapter 2 establishes constructs and provides a model for the research, which guides the experimental designs and outlines the hypotheses. Chapter 3 consists of a focus group and six experimental designs to answer the research questions and empirically evaluate the hypotheses. Finally, Chapter 4 discusses the theoretical and practical implications stemming from the research, along with concluding thoughts, limitations, and suggestions for future research.
Chapter 2 – Literature Review, Model Overview, and Hypotheses

Development

This chapter provides the rationale for the research, establishes the foundations of TVI, the background of the imagination within goal regulation, and the development of the hypotheses. Consumers regularly set goals for themselves. New Years’ celebrations provide an annual invitation for setting new goals. In fact, approximately half of the U.S. population sets a new goal annually, with others participating in New Years resolutions more sporadically. The following Table 1 provides a ranking of the top New Years Resolutions.

<table>
<thead>
<tr>
<th>Rank</th>
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<tr>
<td>1</td>
<td>Lose Weight</td>
</tr>
<tr>
<td>2</td>
<td>Get Organized</td>
</tr>
<tr>
<td>3</td>
<td>Spend Less, Save More</td>
</tr>
<tr>
<td>4</td>
<td>Enjoy Life to the Fullest</td>
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<tr>
<td>5</td>
<td>Stay Fit and Healthy</td>
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<tr>
<td>6</td>
<td>Learn Something Exciting</td>
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<tr>
<td>7</td>
<td>Quit Smoking</td>
</tr>
<tr>
<td>8</td>
<td>Help Others in their Dreams</td>
</tr>
<tr>
<td>9</td>
<td>Fall in Love</td>
</tr>
<tr>
<td>10</td>
<td>Spend More Time with Family</td>
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</table>

Despite having strong intentions to keep these resolutions, less than 10% of all resolutions are maintained. Most individuals forget their resolutions after four weeks (StatisticsBrain 2000). Most self-control problems involve visceral factors, described in the next session, such as hunger and dieting, anger, violence, crimes, fear, panic, and more (Loewenstein 2000a). Visceral factors motivate people to engage in behavior contrary to their long-term interests (Loewenstein 1996, 2000). New Years Resolutions, and goals, fail for three key
reasons. First, individuals fail to account for temptations (Polivy & Herman 2000). When setting goals, individuals plan for success but are unprepared to encounter temptations when present, and so succumb to these temptations. In this case, they only fantasize about the goal (Oettingen 2000). Second, individuals set lofty goals for themselves but do not actually perceive themselves as capable of achieving the goal (Polivy & Herman 2000). Many New Years Resolutions are ideals individuals set for themselves, but perceived as near impossible to achieve. In this scenario, individuals dwell on the impossibilities of goal success and do not foresee goal success (Oettingen 2000). People set unrealistic health goals because it is pleasurable and enjoy a sense of control in setting these goals (Polivy & Herman, 2000). Third, individuals do not make any small, initial efforts to change their behavior, which is a necessary step for behavioral change (Garry & Polaschek 1999; Polivy & Herman 2000; Shedler & Manis 1986; Oettingen 2000), consistent with Gollwitzer’s (1999) theory on goal research. The Theory of Visceral Influences (TVI) accounts for all three reasons for goal failure.

The Theory of Visceral Influences

Consumers experience temptations to their goals. Usually mere activation of a goal produces subsequent behavior consistent with a goal. Fishbach, Friedman, and Kruglanski (2003) conducted five experiments to highlight the effects of goals and temptations. The first experiment examined a target (goals versus temptations) and relevant or irrelevant primes. Participants listed temptation-goal pairs. When primed with a relevant temptation word, participants more easily identified targeted goal related words. Study 2 replicated Study 1, but added a cognitive load manipulation. The findings were the same under conditions of low load.
When cognitive load was higher, though, recognition of a temptation was slowed. A third study examined self-regulatory success with prime-target combinations. In the high self-regulatory success condition, goal primed temptations produced higher reaction times than temptation primed goals. This was not true of low self-regulators. In other words, participants high in self-regulation were quicker to recognize goal-related words after seeing temptation primes. In a fourth study, assessing the interaction among self-regulatory success, temptation versus neutral prime, and perceived value of a goal, under a temptation prime, when either self-regulatory success was high or subjective importance of a goal was high (but not both), reaction time increased (Fishbach et al. 2003).

When temptations are more visceral, consumers experience even larger threats to their goals, where mere exposure to a goal is insufficient. Visceral factors refer to a wide range of negative emotions, as well as drive and feeling states that grab an individual’s attention and motivate them to engage in specific behaviors (Loewenstein 2000a). “At sufficient levels of intensity...visceral factors cause people to behave contrary to their own long-term self-interest, often with full awareness that they are doing so,” (Loewenstein 1996, p 272-273). Visceral factors can change desires rapidly and though essential to livelihood, individuals largely underappreciate the influences visceral factors have on themselves. In other words, individuals tend to overestimate their own reasoning ability in the face of visceral factors (Loewenstein 2000a). Visceral factors contain two key defining characteristics: a direct, hedonic impact and a temporary increase in the desirability of goods and/or actions. A conflicting struggle exists between willpower and desire (Hoch and Loewenstein 1991). For instance, this struggle is exemplified through the combined application of a carrot and a stick. The “carrot” heightens
the pleasure associated with activities that mitigate the visceral factor. The pain of a stick torments the individual when visceral factors go unsatisfied and makes the individual feel progressively worse as visceral factors intensify (Loewenstein 2000a). Visceral factors consist of drive states, emotions, and somatic sensations such as pain (Loewenstein 2000b).

Environmental cues enhance drive states from visceral factors because individuals feel “out of control.” According to TVI, long-term goals fail because, first, individuals are unprepared to deal with visceral temptations (Loewenstein 1996, 2005). TVI explains why temptations, especially more viscerally intense temptations, are difficult to overcome. Visceral temptations are ones that urge consumers to more immediate, short-term action contrary to an individual’s own self-interests, as a result of a direct, hedonic influence from visceral stimuli. Visceral influences decline over time, though immediacy move individuals to behave consistent with visceral drives (Loewenstein 1996). When exposed to visceral stimuli, individuals react first, impulsively, and reason later. Only after reasoning will an individual reflect on his or her own behavior, incorporating action and reaction into the self-concept (Bell, Burdon, Gregory, and Watts 2007).

Loewenstein’s TVI is based on the work of Walter Mischel and colleagues (Mischel 1974; Mischel, Shoda, and Rodriguez 1992). Mischel’s work focuses on 4-year olds, how those children attempt future self-control, and individual differences in delayed behaviors. Experimenters had children wait for a reward in a room, and promised the children superior rewards through waiting longer, which increased children’s wait time. Yet, the sheer presence of any reward led the children to impulsive behavior. Children were more likely to wait for a reward longer with the reward absent. Out of sight, out of mind. An image of the reward versus
the actual, physical reward enhanced wait time. On the other hand, despite the reward being out of sight, children waited less when vividly imagining the rewards. Though, when distracted, a child was able to wait longer, even with a reward in sight. Visceral influences were triggered through sensory contact with the stimuli: presence of the reward or imagining the reward vividly. More cognitive deliberations resulted when visceral stimuli were absence, individuals were distracted, or individuals focused on the attributes (rather than the benefits) of the stimuli (Mischel 1974; Mischel et al. 1992).

Visceral stimuli propel individuals toward visceral behavior based on triggered motives, desires, and emotions, which may include hunger, sex, pain, and/or cravings (Loewenstein 1996). Individuals, in response to visceral stimuli, experience a loss of self-control in the face of powerful stimuli, which heightens desire and limits rational decision-making (Heyman, Mellers, Tishcenko, & Schwarz 2004; Loewenstein & Elster 1992). For instance, Van Boven and Loewenstein (2003) find that individuals’ predictions of others’ behaviors depends on their own visceral drive state. More specifically, individuals who exercised, and consequently felt thirsty and warm, were more likely to project others’ predicted feelings stemming from their experienced drive states. As a result, they experienced more regret than those not in the visceral drive state of fatigue (Van Boven and Loewenstein 2003). O’Brien and Ellsworth (2012) replicated these results, but find that this effect only works under high similarity. When dissimilar from others politically, an individual judging others in a similar visceral state had reduced empathetic understanding.

Garg, Wansink, and Inman (2007) investigate the interactions between affective state and consumption. In study 1, nutritional information moderated the impact between affective
state and consumption. Those in sad affective states (versus happy) were driven to consume 30% more when information was absent. In Study 2, while sadness propelled consumption of an unhealthy snack, the effect was attenuated when offered a healthy snack. In fact, cues can induce moods, which then facilitates or dampens consumption (Garg et al. 2007).

The emotions driving behavior from visceral urgings reduce counter argumentation and cognitive thinking (Amos & Grau, 2011). Because visceral stimuli provide an attention-narrowing effect, consumers’ goals are not top-of-mind. As a result, consumers ignore their own self-interests in order to pursue visceral temptations; the visceral temptations cause individuals to shortsightedly satisfy visceral urgings. While essential to functional behavior, visceral cues lead to negative consequences, such as overconsumption or overspending (Damasio 1994; Labroo and Patrick 2009; Loewenstein 2000a; Wilson and Schooler 1991).

Consumers underestimate the impact of visceral cues on their behavior and overestimate their ability to think critically about temptations (Loewenstein 2005).

Carmichael and Piquero (2004), in the context of criminal offenses, examine the influence of perceived anger influence on individual perceptions of formal and informal sanctions and assault intentions. Heightened emotional arousal (hot states) determines rational choice considerations, with more weight on more immediate benefits. Thus, when experiencing heightened arousal (versus cold states), individuals are more likely to perceive thrill from assault behavior. Powerful emotions sometimes override rational thoughts (Carmichael & Piquero 2004). Vastfjall, Garling, and Kleiner (2004), using two experiments, demonstrate that current mood (both measured and manipulated) determines both anticipated emotional reaction and experienced emotional reaction.
Ditto, Pizarro, Epstein, Jacobson, and MacDonald (2006) examined the effect of hot and cold states on an individuals’ behavior. In a first study, an interaction between risk of winning/losing and visceral cue presence, through a cookie scent and presence, was assessed. When in a cold state, risk determined decisions to gamble for a cookie prize. Though, when in a visceral hot state, cognitive deliberations were reduced, and risk did not predict gambling decisions (Ditto et al. 2006).

The same effect was seen for sexual drive states. When sexually aroused, individuals are more likely to engage in riskier sexual behavior, consider immoral sexual behavior, and act in a criminal, sexually aggressive manner (Ariely and Loewenstein 2006; Ditto et al. 2006; Loewenstein, Nagin, and Paternoster 1997; Nordgren & Chou 2011). Sexually aroused men in relationships were more likely to be tempted by attractive images of women, versus unaroused men. Furthermore, the effect was enhanced even after a time delay, when chances of meeting the woman increased. In a follow up study, increasing a different visceral state (hunger) increased these men’s commitments to their current relationship when viewing attractive women. Yet, when sexually aroused, men were less committed to their partner after viewing highly attractive females (Nordgren & Chou 2011).

Visceral cues drive consumers to more affective states when a reward is more proximal and vivid (Langenderfer & Shimp 2001; Loewenstein 1996; Mischel et al. 1994; Shedler and Manis 1986; Smith and Over 1987; White 1978). Vivid cues are cues that are more tangible and concrete, and work on affective states by intensifying the emotions associated with the reward (Langenderfer & Shimp 2001). Fantasy enhances sexual arousal for males, especially when the
male can more easily imagine a sexual fantasy mentally or with vivid stimuli (Smith and Over 1987).

In another experiment, male condom users were allocated to either a visceral or nonvisceral group, with those in the visceral condition viewing a scenario via video and those in the nonvisceral group reading about the scenario. In the vignette, a couple was deciding to have sex without a condom. Those in the visceral condition were less likely to consider the risk of having unprotected sex and more likely to feel attracted to the female in the situation (Ditto et al., 2006). Ariely and Loewenstein (2006) conducted an experiment using sexually aroused and unaroused individuals as subjects. They find that sexually aroused individuals were more willing to engage in risky and morally questionable behaviors leading to sexual gratification. In other words, hot drive states, such as sexual stimulation, eclipse ethical considerations in favor of sexually immoral motivations of sexual fulfillment (Ariely & Loewenstein 2006). In addition, Loewenstein et al. (1997) find that those sexually aroused during a survey (versus those previously aroused or not aroused), were more likely to behave in a criminally aggressive sexual manner; arousal interferes with good judgment. Furthermore, they find moderate support that lack of cognitive thoughts underlie the effects (Loewenstein et al. 1997).

In addition to our failure to account for temptations, consumers are even more predisposed to undervalue the desire to satiate visceral temptations. Because visceral temptations are fleeting, individuals do not accurately identify future or past visceral influences. At the same time, individuals cannot expect or remember visceral influences (e.g. pain or cravings) at the same level that they actually experience them (Loewenstein et al. 1997). For these reasons, our eyes are sometimes too big for our stomachs or we anticipate
easily waking with an alarm though the snooze button is often used. Similarly, we perceive that it would be easy to quit smoking or maintain a diet, attributing failure to lack of motivation. For instance, from the outside, when we do not experience cravings or pain, we perceive a smoker trying to quit yet having another cigarette as lacking willpower (Courard-Hauri, 2007). Satiated smokers are more willing to delay gratification for the next cigarette. Though, an attention-narrowing effect for smokers craving the next cigarette occurs because they place higher value on the cigarettes (Nordgren & Chou 2011). Ainslie (1974) explains this through the discounting principle, in that we make suboptimal decisions in the present over better decisions requiring a delay.

Ainslie (1974) designed an experiment where pigeons were given a food reward when pecking a red colored key when lighted up. Most pigeons pecked this key more than 95% of the time to obtain an immediate, small reward. Only a few pigeons learned that initial self-control led to a greater, delayed food reward. In a follow up to this experiment, Gipson, Alessandri, Miller, and Zentall (2009) find that pigeons opted for a discriminative stimulus with 50% reinforcement over a non-discriminative stimulus with 75% reinforcement. That is, pigeons made suboptimal decisions. Furthermore, with lower percentages for reinforcement, the effects were the same (Stagner and Zentall 2010). Laude, Pattison, and Zentall (2012) assess pigeons’ choices in different visceral states. Groups of hungry and satiated pigeons were presented with the 50% reinforcement with discriminative stimuli and 75% reinforcement with non-discriminative stimuli. The hungry pigeons, in a visceral state, mirrored the results of prior research, in that they made suboptimal decisions. However, the less hungry pigeons made
better choices, for the 75% reinforcement option, and received more food. Thus, visceral states are associated with greater impulsivity (Laude et al. 2012).

The same hunger effect also holds for individuals. Two experiments were conducted by De Ridder, Ouwehand, Stok, and Aarts (2011). In the first experiment, participants were either satiated or full. They were then given four vignettes describing realistic situations where they would feel hungry alone or with others, and with salty or sweet snacks. The participants indicated how likely they would be to eat the snack and how tempting the snack would be. Hungrier individuals were tempted to eat a snack across all vignettes compared to satiated individuals, and were more likely to be aware of potentially challenging eating situations. In a second experiment, hunger was manipulated again. In this study, participants provided a list of challenges to a weight loss goal followed planning how to handle temptations. Hungry participants made lower quality plans than those in the satiated condition (De Ridder et al. 2011). The effect of vivid food images also produces a visceral response, with individuals salivating more (White 1978).

Gilbert, Gill, and Wilson (2002) asked participants how much they would enjoy eating spaghetti the following day, manipulating the meal type (breakfast versus dinner), measuring differences in hunger, and manipulating cognitive task load. Individuals can make predictions about their imagined reactions to future events without information, using their current states. Busier participants did not differ on their appetite for spaghetti for breakfast or dinner, but rated both as equally enjoyable, moreso when participants were hungry. Non-busy participants, on the other hand, had reversed feelings about the spaghetti. Though hunger did not impact their feelings about spaghetti, they felt the spaghetti would be more enjoyable at dinner versus
breakfast. When the future is uncertain, predictions about future reactions are not always accurate. In a second experiment, hunger and task orientation were manipulated in a field study. Those shoppers without lists purchased a larger number of impulse items and spent more of their total grocery dollars on impulse items when they were hungry (51%) versus those satiated. Those who had a list did not differ on impulse items between hungry and satiated conditions (Gilbert et al. 2002). As another boundary condition to impulsive behavior, credit cards (versus cash) also support impulsive purchases due to the pain of payment and chronic payment of feeling the pain today versus later (Thomas, Desai, and Seenivasan 2011).

As a second explanation to why visceral factors explain goal failure, individuals do not believe they can achieve their goals (Polivy and Herman 2000; Zhang and Huang 2010). This can be explained by drained willpower (Agrawal and Wan 2009; Drolet, Luce, and Simonson 2009; Kivetz and Zheng 2006). Individuals tend to act more impatiently when making decisions about shorter-term options than longer-term ones. In other words, when individuals have a long-term goal in mind, they tend to put a disproportionate amount of weight on immediate rewards, especially when the long-term goals are perceived as less attainable (Cohen 2005). For a third reason, individuals do not create new neural networks in their brains, capable of overcoming visceral influences, which are essential components for changing behavior (Loewenstein 2000a). Only when consumers assign a heavier weight to the cost of the temptation does self-control occur (Zhang, Huang, and Broniarczyk 2010). Furthermore, according to Cohen (2005), specialized training can decrease the effects that visceral cues have on short-term behaviors. Metcalfe and Mischel (1999) suggest Individuals exposed to visceral temptations fall prey to the
power of the visceral stimuli because individuals’ brain processes stimuli in a dual system: a hot system and a cold system.

**The Hot and Cold System**

Because TVI claims thoughts are processed through a dual system of hot and cold, failure to account for actual preferences when in a drive state is referred to as the hot-to-cold empathy gap (Loewenstein 2005). Decisions involving the predictions of tastes or feelings in a future state are largely inaccurate. In a hot and cold gap, individuals fail to estimate their willpower in a current state compared with their future state (Loewenstein and Schkade 1997). Only when experiencing these states, such as fear or anger will individuals likely predict their future behaviors with increased accuracy (Van Boven, Loewenstein, Welch, and Dunning 2010).

The cold system is cognitively based, which allows individuals to keep goals in mind during pursuit of them. Because the cold system activates memory and facilitates perceptual processes, this system operates strategically. In the cold system, consumers think in a cognitively complex manner. Also known as the “know” system, the cold system is hippocampally-centered (McClure, Laibson, Loewenstein, and Cohen 2004; Metcalfe and Mischel 1999). As individuals age, the cold system becomes more dominant, parallel to the frontal lob structure’s development (Green, Fry, and Meyerson 1994; Metcalfe and Mischel 1999). With the cold system activated, individuals think cogently and strategically. Unlike the hot system nodes, the cold system nodes are interconnected, meaning that attention does not have to be focused, but instead, stresses interrelationships with differing agendas (Metcalfe & Mischel, 1999).
Individuals tend to think more logically about temptations in a cold state but when exposed to visceral stimuli, the hot system processes the information (Loewenstein 2005). Whereas the cold system is slow and thoughtful, the hot system is automatic. In a hot state of mind, consumers ignore logic. The hot system, referred to also as the “go” system, processes information rapidly, based on emotions and learned associations with stimuli as opposed to weighing costs and benefits (Carmichael & Piquero, 2004). The amygdala controls the hot system. When hot spots are triggered in the mind, the individual automatically responds since there are little connections to other hot or cool spots when a hot spot is activated (McClure et al. 2004; Metcalfe and Mischel 1999). Certain individuals are more prone to hot processing, such as those in earlier states of development, younger individuals, temporarily or chronically stressed individuals, more neurotic individuals, and those exposed to certain pharmacological factors (e.g. epinephrine or adrenaline). When stimuli trigger the hot system, individuals react emotionally and in accord to the stimuli. However, when out of sight, individuals do not think about the stimuli and so the stimuli do not affect the individual (Metcalfe and Mischel 1999).

In a study by Hsee, Zhang, Yu, and Xi (2003) participants were given two options for prizes (A: an increasing sequence of prices with total value of $135 versus B: a decreasing sequence of prices with a total value of $145). Half were asked to predict their prize choices and the other half to rate their predicted enjoyment of both. For those rating their enjoyment, 68% favored option A. However, the half predicting their prize choices, only 49% chose A. This effect was also seen in a job offer experiment. 34% of participants predicted greater happiness in a job where they received moderate office space when a similar new hire received greater office space (versus both new hires receiving equally small office space), but 57% chose to work
for the same company. The inconsistency between perceived enjoyment and preference, given a choice, is attributed to hot-cold gaps. In the decision choice, participants behaved economically to maximize their value, placing a higher value on colder attributes. Though when it came to perceived enjoyment, subjects used affective states to assess pleasure, a decision in a hot frame of mind (Hsee et al. 2003; Mano 2004).

Loewenstein (2005) differentiates the hot-to-cold empathy gap versus the cold-to-hot empathy gap. In the hot-to-cold empathy gap, individuals are in a hot state and fail to appreciate the extent to which their decisions are based on their affective state. Instead, individuals believe they will behave similarly in a hot state. For instance, crimes of passion occur because individuals are in the moment and estimate they would act similarly in the future. This is not the case though.

The cold-to-hot empathy gap, on the other hand, occurs when individuals think logically and make assumptions that they will similarly behave logically when affectively aroused. In visceral drive states, though, individuals lack self-control (Loewenstein 2005). In a longitudinal study, present-orientation influences problematic outcomes, discounting predicts long-term problematic outcomes, and poor impulse control predicts criminal behaviors. In effect, poor impulse control and discounting, the tendency to deliberately devalue the future in favor of present focus, lead to low self-control (Nagin and Pogarsky 2004). This was also true in alcohol abuse situations. The perceived unavoidable negative consequences of alcohol overindulgence motivate individuals to over-consume alcohol. Lower self-control provides individuals with permission for substance abuse (Crawford, Moore, and Ahl 2004; Steele and Josephs 1990).
Though self-licensing for hedonic consumption is a separate topic from the impact of self-control on impulsivity (Huberts, Evers, and De Ridder 2012).

Self-control issues also result from individual behaviors after exerting initial effort, since self-control is a depleteable resource (Kivetz and Zheng 2006; Ozdenoren, Salant, and Silverman 2012). Participants were assigned to either a high or low effort condition. After the task, participants were allowed to choose between a vice (painful assessment with long-term benefits, high-brow option, and healthy snack) and a virtue (fun study with no benefits, a low-brow option, and an unhealthy snack). A second experiment adds guilt as a factor, finding that guilt amplifies the effect of vice selection after exerting high effort. Yet, a third experiment reverses this effect when the instructions highlight income as a potential compensation method for completing surveys in different universities. This effect extends to excellence, meaning that high performance and high effort both lead to choices of vice, especially under conditions of higher guilt. Fifth and sixth studies identify this effect as stemming from effort expended. On the other hand, individuals are more likely to pay more money for virtues over vices (Kivetz & Zheng 2006).

In a similar series of studies, Read, Loewenstein, and Kalyanaraman (1999) examine vice versus virtue to explain an immediacy effect. In a first study, highbrow movies (virtues) were selected less often than lowbrow movies (vices) in simultaneous, immediate choice options compared to sequential choice options. Virtues were more often selected on later dates than earlier days. When given options for either prize-draw (virtues) or instant-win lottery tickets (vices) individuals likely chose one of each when allowed a simultaneous choice but not a
sequential choice. When selecting an immediate option, individuals chose vices moreso than virtues (Read et al. 1999).

Because individuals can remember experiencing pain, but not the pain itself, the cold-to-hot empathy gap is more pronounced when individuals are unfocused on the sensations of the pain (Loewenstein 2005; Read & Loewenstein 1999). An experiment was conducted where participants experience a pain induction and either focused on the sensation or distracted. Responses were measured immediately or after a delay. All participants completed a manual task and were asked the degree to which they were willing to accept pain for money in the future. Although sensation-focused individuals did not differ between the immediate and delayed time conditions, those distracted participants were more willing to accept pain to obtain money with the time delay versus immediately (Read & Loewenstein 1999).

As a result of the cold-to-hot empathy gap individuals usually predict that they will make more reasoned decisions than their actual decisions (Courard-Hauri 2007). Individuals make decisions for the future to satisfy current states though the hot-cold gaps make it difficult to make predictions when in a differing visceral condition. Read and van Leeuwen (1998), manipulating hunger, find that when individuals are hungry (experiencing a hot state), they make advanced choices resulting in the selection of junk food. When not experiencing hunger (cold state), they made advanced choices resulting in healthier snack choices. Of those who first made a healthy advanced snack choice, a majority changed their minds, especially those who were hungrier. The reverse was not true; in other words, those who made advanced choices for the unhealthy choice did not tend to change their minds. Additionally, individuals in hot states make unhealthier snack choices immediately moreso than in advanced decisions. The
experiment provides support that the hot-to-cold and cold-to-hot empathy gaps equally affect behaviors (Fisher and Rangel 2014; Nordgren and Chou 2011; Read & van Leeuwen 1998).

Similarly, common sense says that individuals should not plan vacations during winter, order too much food than they will actually eat, and have a hard time overcoming addictions. In a study on consumption rates, Galak, Kruger, and Loewenstein (2013) find that consumers in visceral states consume too quickly, which decreases their sense of pleasure from consumption. Likewise, when forced to make a decision about a long-term investment, individuals tend to overestimate their level of interest of the same investment in a future state (Loewenstein, O’Donaghue, and Rabin 2003). This effect was empirically documented by Della Vigna and Malandenier (2002), who find that consumers to overpay for health clubs on a monthly basis, due to overestimating their commitment to exercise.

In addition, Loewenstein (2005) classifies these hot-cold gaps as occurring retrospectively, prospectively, and interpersonally. In retrospective, individuals look back on their own behaviors in an affective state, such as a wild night out, and have a hard time believing their own past behaviors in the affective state. In prospective, individuals tend to believe they will behave logically in the future, and do not take into account drive states. For instance, setting an early alarm seems reasonable to plan for, but when the alarm goes off, the tired individual may succumb to the snooze button, and might even arrive late to a meeting because of fatigue (Loewenstein 2005). Along those same lines, hungrier shoppers tend to purchase more food than they predict, versus satiated shoppers (Nisbett and Kanouse 1969). Finally, interpersonal hot-cold gaps are those where individuals compare their own behaviors to others’. So, when a parent commits to quitting smoking, but has a cigarette, the child may not
understand how the parent fails to maintain his or her goals. This judgment is made because, without being in the drive state himself or herself, the individual cannot understand what the craving for the next cigarette is like (Loewenstein 2005).

Nordgren, van der Plight, and van Harreved (2006) empirically evaluate the hot-cold gap. Participants were exposed to conditions, mentally fatiguing them to varying degrees, and then read a story about a student who studied less than he anticipated. Then, participants were asked to evaluate the extent to which the fatigue (versus lack of motivation) led to less hours studying. Participants in the higher levels of fatigue (hot state) (versus those in lower levels of fatigue) were most likely to attribute the cause of the student’s failure to study to fatigue versus lack of motivation. Nordgren et al. (2006) argue that interpersonal hot-cold gaps can be reduced when the individual is in a similarly extreme visceral state to the person they are judging. In a second study, empathy was manipulated so that those in the empathy conditions were reminded about their current states (if given the fatigue condition) or asked to empathize with the student (if given the non-fatigue condition). There was no interaction between empathy and fatigue; the findings reveal the strength of the hot-cold empathy gap. The biasing effects of the hot-cold empathy gap could not be overcome, even when instructed to do so. In a third study, pain manipulations (hot state) were induced during or post a memory self-assessment. Those retrospectively evaluating their performance (versus those evaluating their performance during the pain manipulation), tended to put less (versus more) blame on the pain (hot state) condition for poor memory performance (Nordgren et al. 2006).

In a follow up set of experiments, Nordgren, van Harreveld, and van der Pligt (2009) find that impulse-control mediates the effect of fatigue on intentions for students to cram for an
exam. In a field experiment on hunger, Nordgren et al. (2009) find that more hungry participants chose more tempting snacks. Though hungry participants were more likely to return their snacks a week later; snack temptation explained why participants returned their snack choice. In a third study examining smoking temptations, smokers in high impulse control conditions (versus low) were more likely to expose themselves to more temptation and subsequently succumb to that temptation. This effect was also found in a fourth, field study (Nordgren et al. 2009).

Nordgren, van der Pligt, and van Harreveld (2007) conducted a follow up study, manipulating visceral state through a fatigued, non-fatigued, and imagined fatigued condition, and had participants read a vignette about a fatigued mother who could not afford baby formula so shouted racial slurs at the cashier. The fatigued individuals were more likely (versus the non-fatigued and imagined fatigued) to evaluate the fatigued mother more positively and similar to themselves. Even imagining a visceral state could not overcome the bias of the hot-cold interpersonal empathy gap. This effect also held for a hungry visceral state. Those in hungry states were more compassionate and positive toward a hungry man in a video, aggressively eating unhealthy food. In a third study on retrospectively regrettable sexual behavior, Nordgren et al. (2007) find perceived control mediates the effect of arousal on evaluations of past, regretted sexual behaviors. A fourth study rules out general arousal, by finding that hot states influence the judgment of corresponding impulsive behavior (Nordgren et al. 2007).
TVI and Marketing

Prior research on temptations has tended to focus on hot cues, but not cold system intervention. Hot cues cause direct, hedonic responses, such as salivation or arousal (Amos and Grau 2011; Gal 2012; White 1978). Arousal interferes with judgment, making individuals vulnerable to visceral influences in marketing (Fedorikhin and Patrick 2010; Loewenstein, Nagin, and Paternoster 1997). At times, the mere presence of goal-congruent options vicariously fulfills goals and provides consumers with an excuse to act counter to a goal (Kivetz and Zheng 2006; Wilcox et al. 2009). With consumers inundated by visceral cues promoting desire-driven behaviors, how can consumers say “no” when their hot systems say “go”?

As Loewenstein (1996, p 274) says, “success, in many professions, is achieved through a skillful manipulation of visceral factors. Automobile salespersons, realtors, and other professionals who use ‘high pressure’ sales tactics, for example, are skillful manipulators of emotions.” Consumers overestimate the long-term feelings of an offer, increasing the incentives marketers have to enhance the value of an offering via sale offers, point of purchase displays, or music (Loewenstein et al. 2003). Additional evidence also indicates that affect and preference depends on interactions between affect and task variables (e.g. involvement, message content, etc.) [Mano 2004]. Certain affective drive states can lead to purchases for items that produce similar affective responses (Bitner 1992). For example, when in a positive state, consumers may seek out products to maintain their current positive emotions (Bitner 1992; Mano 2004). On the other hand, consumers may seek out products with opposite affective tones compared to the drive states they are currently experiencing. Such is the case when negative emotions lead to higher purchase intentions (Menon & Kahn 2001; Mano 1999).
On the other hand, affective valence alone may not drive all evaluations of advertising or offerings, but may depend on arousal levels (Gorn, Pham, and Sin 2001). In a study by Gorn, Pham, and Sin (2001), two studies investigated the impact of ad tone and mood. In the first study, mood affected ad evaluation for ambiguous-affective toned ads. In a second study, arousal influenced evaluations of an ad so that ad evaluations were more affected by the ads tone under conditions of high arousal (Gorn et al. 2001).

Marketers frequently use visceral cues to stimulate hot system thoughts toward marketplace offerings (Kivetz and Zheng 2006). If these offers expire soon or may be snapped up by another person, they induce an urgency to take advantage of the deal (Loewenstein 1996). Time pressure forces an individual in a hot state to make a decision quickly (Loewenstein et al. 2003). When marketers use a time element in a promotional offer, consumers are likely to take advantage of a deal sooner since there are significant economic savings offered during a specific time window (Hoch & Loewenstein 1991).

Visceral cues in marketing work by increasing physical and sensory proximity. Some visceral cues commonly employed include: promotional deal types, colors, temporal proximity, vividness, and sampling (Amos and Grau 2011; Amos and Spears 2010; Loewenstein 1996; Siegel 1979; Stracca 2004; Wadhwa and Shiv 2008). Atmospherics in retail stores also enhance desire through the senses (Kotler 1973-1974; Nord and Peter 1980). Peck and Childers (2006) find sensory appeals through visual designs have an effect on impulsive behavior. In addition, an individual’s need for touch increased the likelihood of making an impulsive purchase. Learned associations, such as the association between the smell of cookies and tastiness, produce appetitive and/or emotion inducing, unconditioned responses to stimuli (Metcalfe and
Mischel 1999). Lurie and Mason (2007) also supported sensory appeals as influencing impulsiveness, as virtual reality, for instance, may substitute for vivid information and haptic experiences. Thus, arousing atmospherics can be manipulated in both physical and online retailing environments. When more pleasurable cues are provided in an environment, spending increases (Menon and Kahn 2002).

Visceral influences, likewise in marketing efforts, urge consumers to respond impulsively against their own long-term interests. Generally, visceral cues work through emotions or lack of emotions such as vanity, fear, pity, greed, pain, and more (Amos & Grau 2011; Amos & Spears 2010; Loewenstein 1996, 2010). For instance, fear works through probability of a threat and severity of outcome. Furthermore, fear increases just before experiencing a threat and is subject to vividness of an imagined threat (Loewenstein, Weber, Hsee, and Welch 2001). Likewise, curiosity also produces a visceral state. Participants were offered a choice between a candy bar and the answers to a quiz, either before a quiz or after taking a quiz. Prior to the quiz (the hot state) individuals more often chose the answers, due to increased curiosity. After the quiz (in the cold state), participants equally chose the candy and the answers. A second experiment adds the factor of time delay in satisfying curiosity (immediate satisfaction versus one hour delay). The hot condition where the answers were offered immediately produced the greatest percentage of individuals who chose the answer option. The same results were found in Study 3 (Loewenstein, Prelec, and Shatto 1998).

Certain promotional advertisements are more visceral in natures (Amos & Grau 2011; Amos & Spears 2010). Vividness and reward proximity heighten consumers’ emotional response to advertisements with visceral cues (Stracca, 2004). Advertisers vividly simulate the
experience of consumption through ads (MacInnis & Price 1987; Wells 1987). Subsequently, individuals will have less cognitive deliberations and narrowing effects consistent with visceral influences (Lurie & Mason 2007). For instance, promotional deals, before and after images, and customer testimonials are more visceral since they make a reward more temporarily present, and therefore more vivid. In fact, these cues work in concert, compounding on one another. Visceral cues in ads change individuals’ attitudes by emphasizing the rewarding aspects advertised (Amos & Grau, 2011; Amos & Spears 2010). By including these cues, a visual sensory appeal enhances the reward’s hedonic benefits (Amos & Grau 2011; Amos & Spears 2010). These promotional advertisements work by narrowing the focus on the desired reward to intensify emotions associated with obtaining the resultant product or service, and encouraging individuals to process the information in the ad in more of a hot state, avoiding complex cognitive deliberations (Langenderfer & Shimp 2001; Loewenstein 1996). When in visceral states, cognitive capacities are compromised, promoting visceral impulse (Nordgren and Chou 2013).

Reward proximity and vividness works in weight loss advertising via a short time in which a reward is achievable, before and after pictures, and customer testimonials. All three factors drive consumers to respond more positively to the advertisement, working in concert. Therefore, visceral influences having a compounding effect. High individual body weight involvement augments this effect for weight loss advertising (Amos and Spears 2010). Before and after images increase reward-oriented thoughts. The presence of testimonials reduced total thoughts. Although ad skepticism did not impact the overall interactions, ad skepticism
slightly reduces buying impulses and attenuates the effect from temporal proximity (Amos and Grau 2011).

Higher arousal restricts cognitive processing (Mano 1994). Visceral factors can be manipulated by scammers by increasing the rewards associated with emotional drive states (Fisher, Lea, and Evans 2013; Langenderfer & Shimp 2001). “The more proximate in time or space a scam-related reward is made to appear, the greater the visceral response that should be evoked,” (p 773). Langenderfer and Shimp (2001) suggest that under high visceral influence, self-control can attenuate vulnerability. However, in low visceral influence, social isolation, cognitive impairment, gullibility, susceptibility to interpersonal information, skepticism, and scam knowledge influences vulnerability (Langenderfer & Shimp 2001). Alarmingly, skepticism does not moderate the effect of visceral cues on consumer impulsivity (Amos and Grau 2011).

**The Consumer Imagination as a Self-Regulating Tool**

There is much known about the imagination in prior scholarly research, where the imagination “entails sensory representations of ideas, feelings, and objects or experiences with objects. It is said to involve a cognitive process in which perceptual information is represented in working memory via the creation of daydreams, fantasies, and imaginative construction,” (Walters, Sparks, and Herington 2007, p 24). In other words, imagination is envisioning the yet-to-be-experienced. The imagination combines existing information in memory with the unknown (Spears and Yazdanparast 2013). Other researchers use terms such as consumption visions (Phillips, Olsen & Baumgartner 1995; Walters et al. 2007), imaginative consumption (Cowan and Dai 2014), mental imagery (Etchner and Ritchie 1991; Gartner 1993; Jenkins 1999;
Lubbe 1998), mental simulation (Escalas 2004; Oettingen 2012), narrative self-referencing (Debevec and Romeo 1992), and narrative transportation (Green and Brock 2000) to describe the imagination. Key aspects of the imagination include the self, marketing offerings, and transformation into the future (Schau 2000).

Scholars have researched the imagination in such contexts as advertising, branding, individual characteristics, memory, attitude formation, and goal progress. The imagination enhances attitudes toward an ad (Babin and Burns 1997; Schlosser 2003) or products placed in a storyline (Green and Brock 2000; Petrova and Cialdini 2005), especially when the ad is more concrete than abstract (Burns, Biswas, and Babin 1993; Phillips 1996; Walters et al. 2007). Furthermore, the imagination enhances weak arguments by reducing critical thoughts (Escalas 2004) but not when the ad is viewed skeptically (Escalas 2007), working through self-referencing (Debevec and Romeo 1992). Peripheral cues are highly influential and visions occur through higher levels of information processing (McGill and Anand 1989; Shiv and Huber 2000). For brands, the imagination enhances brand-related visions (Krishnamurthy and Sujan 1999; Sujan, Bettman, and Baumgartner 1993).

The imagination is more active in certain individuals, such as self-verifiers rather than self-enhancers (Cowan and Dai 2014), those higher in affect intensity (Escalas, Moore, and Britton 2004), and those with higher affective involvement, enjoyment, uniqueness needs, and openness (Cowan and Spears 2014). On the other hand, those low in cognition needs or cognitively loaded have a harder time imagining (Drolet and Luce 2004; Shiv and Huber 2000). In imaginative visions, individuals are more likely to believe those visions will occur in the future (Carroll 1976; Koehler 1991; Sherman, Cialdini, Schwartzman, and Reynolds 1985). Likewise,
strong imaginations can create false memories that reshape the past, in addition to the present and future (Garry and Polaschek 1999; Mazzoni and Memon 2003; Shedler and Manis 1986). This means that individuals more likely behave consistently with their imaginings (Anderson 1983), especially when a future is easier to imagine (Berry and Carson 2010). Imagining impacts future behavior because imagining shows perceptual activity of actual behavior (Finke 1980; Volpert 1985). In these facets, the imagination impacts moods and beliefs (Gregory, Cialdini, and Carpenter 1982; Langens 2001, 2002). Though, process (versus outcome) focused thoughts are more helpful in impacting these moods or beliefs (Escalas and Luce 2003; Thomas et al. 2007).

Imagining is also instrumental to problem solving and goals (Sujan et al. 1993; Taylor, Pham, Rivkin, and Armor 1998). Consumers can activate ideal levels of self-efficacy through their imaginations (Taylor et al. 1998). The mantra, “practice makes perfect,” illustrates the effect of the imagination. Physical practice, such as firming one’s muscles, increases individuals’ abilities to achieve (Hung and Labroo 2011). Imagination leads to the same result by activating the muscles, physical or mental, to change behavior (Korn and Johnson 1983). By imagining, individuals activate corresponding muscles (Korn and Johnson 1983) and improve actual behavior (Richardson 1967). Such an effect has been found for student grades, therapy sessions, and athletic accuracy. Imagining studying (versus not imagining studying) increased the hours students spent studying, which improved their test scores (Leahy and Sweller 2008). Likewise, imagining successful attendance of therapy sessions in the future (versus not imagining) increased the likelihood that individuals continued their therapy sessions (Sherman
and Anderson 1987). Finally, athletes who imagined performance were more likely to have improved actual performance (Marks 1973).

It is in this area of the imagination that is now expounded upon to investigate goals and temptations experienced that conflict or are compatible with those goals. Generally, when individuals set goal implementation intention, he/she has increases the likelihood of goal achievement (Taylor and Brown 1988). However, this is not always true (Bayuk, Janiszewski, and Leboeuf 2010). Individuals are flexible and strive to achieve goals using both reflective and reflexive psychological processes (Gollwitzer, Delius, and Oettingen 2000).

**Fantasy Realization Theory**

Therefore, mental processes are intricately linked to control of bodily reactions, including visceral reactions toward or away from a goal (Critchley and Harrison 2013). Though imagining can make a reward more appetitive by picturing its visceral qualities (Loewenstein 1996; Mischel et al. 1992), imagining also activates strategies capable of overcoming visceral factors (Rivkin and Taylor 1999). Hunger can be destructive when a person has a diet goal. For instance, willpower represents an attempt to suppress visceral motivations, which exacts an immediately disagreeable cost (Loewenstein 2000b). When an individual desires to lose weight and makes the decision to turn down chocolate cake, the individual feels emotional displeasure and even physical remorse, such as a rumbling stomach. This dieter has to mentally and physically prepare him or herself for an exertion of willpower (Loewenstein 2000b).

Loewenstein (2000b) calls this psychic preparation, citing James (1890), who shares how the struggle is mental. To make a wise decision to forgo the cake, the dieter has to think about
the dieting goal and cling to these thoughts even when faced with the overwhelming urge to try a piece of the cake. The only way to overcome the strong emotions triggered by the site of the cake, individuals have to keep their dieting goal top of mind. By top of mind, the individual has to think of the diet as soon as the cake is in site. Otherwise, the individual may lose sight of the long-term dieting goal. Loewenstein (2000b) questions whether this type of mental focus would be sufficient for willpower to overcome a visceral temptation. Oettingen (1996) argues that mental efforts do enhance willpower, and leads to more success with goals, outlined in her Fantasy Realization Theory (FRT).

According to FRT, fantasies are future-oriented thoughts and images that depict likely outcomes or behaviors imagined, independent of the probability of those outcomes or behaviors occurring (Oettingen 1996). These imaginings can take on either positive or negative futures and do not require actual facts (Klinger 1971, 1990; Singer 1966). For instance, in fantasizing about the future, the dieter may fantasize about wearing a size 2 dress, going out with friends, and receiving many compliments because of her beauty. The chances of this dieter losing weight and fitting into size 2 can be slim. So despite indulging in positive fantasizes, the individual may have little chance of accomplishing her goal. At the same time, another dieter, only 10 pounds away from her goal of wearing a size 2, can experience negative fantasies. In this case, she may feel like she does not have the time or energy to lose that last 10 pounds and fantasizes about herself failing, eating out at McDonald’s, and attending parties lacking healthy food alternatives. According to Oettingen’s (1996) FRT, while positive expectations should increase motivation, positive fantasies do not. It is the combination of negative impending realities with positive fantasies that enhance willpower in individuals. In other words, any dieter
has to fantasize about both the compliments received after losing the weight and the parties lacking healthy options to have marked success in achieving dieting goals.

Willpower is achievable by combining these positive fantasies of future goal success with reflections on negative aspects of reality (Gollwitzer and Oettingen 1998). Optimistic thinking rather than positive fantasies increase progress, caring, feelings, and thinking in regards to a goal and, at the same time, buffers against negative consequences (e.g. drug usage) via self-efficacy (Oettingen 1996; and Carver 1992; Taylor and Brown 1988; Taylor 1989). FRT research provides evidence that the combination of positive expectations and negative fantasies cause individuals to have better success with all kinds of goals, both pleasant and unpleasant goals, goals with varying levels of difficulty, and even goals where individuals have experienced prior commitment issues (e.g. Brandstatter et al. 2001; Chasten, Park, and Schwartz 2001; Lengfelder and Gollwitzer 2001; Milne, Orbell, and Sheeran 2002; Oettingen, Brinkmann, Mayer, Hagenah, Schmidt, and Bardong 2003; Oettingen, Mayer, Thorpe, Janetzke, and Lorenz 2005; Orbell, Hodginks, and Sheeran 1997; Sheeran and Orbell 1999, 2000; Scherer 2001). A variety of studies have examined fantasy versus positive expectations. Table 2 below summaries the basic findings from these experiments, detailing the study context and potential explanations.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Study Context</th>
<th>Key Findings</th>
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<tr>
<td>Achtziger, Fehr, Oettingen, Gollwitzer, and Rockstroh (2009)</td>
<td>Areas of the Brain Used</td>
<td>• Mentally contrasting uses more areas of the brain to problem-solve, involving stronger brain activity, working memory, and episodic memory. • Contrasting, compared to indulging, dwelling, or daydreaming, provided greater brain demand</td>
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reflected in continuous magnetoencephalographic (MEG) activity.

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<th>Study</th>
<th>Intervention and Conditions</th>
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<tr>
<td>Adriannse, Oettingen, Gollwitzer, Hennes, De Ridder, and de Wit (2010)</td>
<td>Contrasting and Implementation Intentions (MCII) in Maintaining Willpower</td>
<td>• When engaged in MCII, participants were less likely to consume unhealthy snacks.</td>
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<td>• MCII was superior to either of implementation intentions or mental contrasting alone.</td>
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<td>• MCII provides better clarity about critical cues of unhealthy snacking.</td>
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<td>Kawada, Oettingen, Gollwitzer, and Bargh (2004)</td>
<td>Implicit vs. Explicit Goals</td>
<td>• Goals do not have to be explicit for individuals to pursue them.</td>
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<td></td>
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<td>• Participants are equally effected when assigned conditions of either implicit goals or explicit goals.</td>
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<td>Oettingen (2000)</td>
<td>Relationship Initiation, including a Control Condition</td>
<td>• Intentions of getting to know a stranger were strongest in the fantasy-reality conditions.</td>
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<td></td>
<td></td>
<td>• When expectations were high, those in the fantasy-reality condition reported more eagerness to get to know the interest and were more willing to exert effort.</td>
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<td>• When expectations were low, the other groups reported higher eagerness than the fantasy-reality condition.</td>
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<td>• When expectations were low, the fantasy-reality group was more likely to want to give up.</td>
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<td>• A similar pattern emerged for disappointment in the mere fantasy condition.</td>
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<td>Oettingen and Mayer (2002)</td>
<td>Job Hunting Pursuit of Romantic Relationships Academic Grades Recovery from Illness</td>
<td>• Expectations (versus fantasy) led to more job offers and higher salary.</td>
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<td>• Ruled out number of applications as a mediator.</td>
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<td>Positive expectations result in more successfully pursued romantic relationships, better grades, and stronger recovery.</td>
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<td>Oettingen and Waden (1991)</td>
<td>Weight loss for 25 obese women over 52 weeks</td>
<td>• Weight loss expectations and fantasy are positively related.</td>
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<td>• Negative fantasies and positive expectations resulted in the greatest weight loss.</td>
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<td>• Low expectations for weight loss and positive fantasies did not result in as much lost weight.</td>
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<td>• Dietary conditions did not determine weight loss differences.</td>
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<td>Study (Year)</td>
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<td>Oettingen, Bohringer, and Losert (1995a)</td>
<td>Children’s Academic Progress Learning English</td>
<td>The children in the mental contrasting group put forth more effort to learn English and were more committed to the goal. The mentally contrasting group scored almost two grades higher than those participants in the indulging or dwelling conditions.</td>
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<td>Oettingen, Honig, and Gollwitzer (2000)</td>
<td>Female students’ expectations for entering into a relationship and engage in family planning</td>
<td>The fantasy-reality group resulted in the highest expectations of success, early action, and felt more active. Those in the fantasy-reality groups were more eager to get to know a stranger and felt more positively about the outcomes. The expectations of the fantasy-reality group were even more pronounced after a week delay. The fantasy-reality condition produced the highest desire to plan for a family.</td>
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<td>Oettingen, Losert, Wood, Nathanson, and Kazak (1995b)</td>
<td>Academic Goals and Professional Goals</td>
<td>Although both goal intention and implementation intention groups report similar intentions and commitment to write a CV, more individuals in the implementation intention group accomplished writing a CV. Those in the implementation intention condition completed tests in closer proximity to the self-set time compared to those in the goal intention condition. The if-then link and associated commitment facilitates goal-related action.</td>
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<td>Study 1 &amp; 2: Romantic relationship success study Study 3: Transitioning into work life after graduation study Study 4: Patient Recovery</td>
<td>Students with higher expectations of relationship initiation success were more likely to get together with their crushes. Participants who engaged in positive fantasizing reported a lower likelihood of getting together with their crushes. High expectations of success initially led to better professional achievement. Positive fantasizes of success had reduced professional achievement even after controlling for incentives to obtain a job. Optimistic patients recovered more quickly, though patients engaging in positive fantasies did not show the same improvements.</td>
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<tr>
<td>Authors (Year)</td>
<td>Study Title</td>
<td>Findings</td>
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<td>Oettingen, Mayer, and Brinkmann (2010)</td>
<td>Effectiveness of Decision Making</td>
<td>Mental contrasting is helpful in reducing time for decisions and making more efficient decisions concerning everyday life.</td>
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<td>Oettingen, Pak, and Schnetter (2001)</td>
<td>Study 1: Personal Responsibility in Setting Plans Assessing Cognitive, States Study 2: Assessing Affective States via Study Abroad Study 3: Behavioral States in Interpersonal Issues Study 4: Field Study of Math Skills</td>
<td>• The possibility of obtaining a happy resolution to the interpersonal problem was highest for the contrasting condition under high expectations of success but lowest for those in the contrasting group under low expectations of success. • Changes in expectations and incentive values were ruled out as alternative explanations to FRT. • Affective states follow cognitive patterns of goal commitment, even after a time delay. • The highest levels of energized feelings occur for those in the contrasting condition, especially with high expectations of success. • Those in the contrasting group acted more swiftly to fix their interpersonal problems. • Contrasting was most helpful in improving math skills. • Those in indulging and dwelling conditions tended to underachieve when provided with good prospects and overachieve when provided with poor prospects of success.</td>
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<td>Parks-Stamm, Gollwitzer, and Oettingen (2007)</td>
<td>Goal Distractions Alternative Routes of Achieving a Goal</td>
<td>• Distracting goal-consistent cues were disregarded when the if-process was active. • Alternative goal-directed responses were still considered when the then-process was activated. • Those in the implementation intention condition performed the task better concerning targeted cues, more quickly responding. • Those in the mere goal intention condition responded better to alternative cues as part of the goal. • Individuals who engage in mental contrasting are less distracted by alternative ways of achieving goals and pursue a targeted strategy. • The if-process narrows attention on the goal, and the then-process makes actions of the goal more efficient and automatic.</td>
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</table>
Over a series of experiments, FRT supports the combination of imagining an optimistic future alongside considering a negative reality as motivational for goal-consistent actions so that “expectations gain relevance for action,” (Oettingen 1996, p 252). Fantasy-reality, or mental contrasting, requires imagining this combination (Oettingen, Mayer, and Thorpe 2010). Either alone, imagining the optimistic future, known as indulging, or imagining the negative reality, known as dwelling, means an individual will unlikely follow through with the goal. With FRT, it is common to have these three experimental conditions: the fantasy-reality condition (mental contrasting), fantasy-only condition (indulging), and reality-only condition (dwelling) (Oettingen 1999; Oettingen, Honig, and Pak 1999).

Thus, this dissertation study focuses on all three conditions to examine goal-related thoughts in a promotional advertising context. Traditionally, Oettingen’s FRT studies measure such dependent variables as goal commitment, feelings toward the goal, and behavioral indications of goal progress. However, this dissertation study focuses on how consumers respond to temptations while pursuing a long-term goal, and will thus use measures that relate to the urgings individuals have in regards to these temptations. Following the lead of other advertising research examining visceral cues, such as Amos and Grau (2011) and Amos and Spears (2010), this study utilizes attitudinal measures toward temptations in advertising including: attitudes toward the ad, attitudes toward the brand, attitudes toward the product advertised, and purchase intentions. Higher attitudes and purchase intentions reflect decreased commitment to goals since the advertisements are temptations to a goal. On the other hand,
lower attitudes reflect higher goal commitment, since the advertisement represents a goal temptation.

According to FRT, when individuals are primed with optimistic thinking and knowledge regarding an accurate reality, individuals are more predisposed to pursue their goals (Oettingen et al. 2000, 2001; Stadler et al. 2010; etc.). Study 1 of this dissertation examines temptations contrary to long-term goals. For instance, when an individual has a dieting goal and has the opportunity to buy a slice of chocolate cake, the chocolate cake would serve as the temptation contrary to the long-term goal of dieting because buying the cake would be a sign of weak goal commitment. Rather, the individual desires to pursue short-term goals of pleasure. Hypotheses 1, 3, 5, and 6 examine temptations and imagination thought types within this type of context, a temptation contrary to the long-term goal.

Studies 2 and 3 of this dissertation examine temptations consistent with the long-term goal, but contrary to the individual’s ideal route to achieve his/her goals. An individual with a dieting goal may be tempted by an easy way to lose weight, such as diet pills or using a personal trainer, both of which may lead to the end result of weight loss. However, both are alternative routes to the end goal, but neither are ideal for an individual to accept over personal effort and dieting because after achieving the end result, the individual still has to maintain the weight loss. Based on FRT, individuals primed with optimistic thinking and negative realities avoid responding to these types of alternative avenues of achieving a goal (Parks-Stamm et al. 2007). Thus, hypotheses 2, 4, 7, and 8 focus on this type of context.

Indulging
Loewenstein (2000b) argues that overestimation of willpower can be destructive. Individuals who overestimate their own willpower tend to enter into situations with a biased belief in their abilities, resulting in low self-control (Loewenstein 2000b). This is consistent with indulging visions, or the fantasy-only condition. Individuals hold unrealistically positive indulging fantasies about themselves (Brown 1986; Lewinsohn, Mischel, Chaplin, and Barton 1980), and overestimate their ability to achieve their goals (Langer 1975). Positive thinking can increase happiness and creativity (Taylor & Brown 1988), as well as overall health (Scheier and Carver 1987). Yet, positive fantasizing does not lead to goal commitment.

Instead, positive fantasies reduce motivations because individuals already believe the positive fantasy to have occurred (Oettingen 1996). This is consistent with research on imagination, the creation of false memories, and impact on belief in future events (see Carroll 1976; Garry and Polaschek 1999; Shedler and Manis 1986) where imagination impacts future behavior and beliefs. For those in the fantasy-only condition, subjects are only asked about positive endings and fantasize about the future possibilities.

Goal-Incongruent Temptations. Because a goal-incongruent temptation, such as a vacation ad when an individual has savings goals, does not activate willpower for those in the indulging condition, these individuals are still susceptible to the effect from visceral temptations. Unprepared to face temptations, when a temptation has more visceral cues, an individual will experience stronger urgings in regards to the temptation. The presence of these visceral cues, such as customer testimonials and a promotional deal, will lead the individual to have higher ad-evoked thoughts. So, individuals in the indulging condition and exposed to a vacation ad with visceral cues will have even higher attitudes toward the ad,
attitudes toward the brand, attitudes toward taking a vacation, and higher purchase intentions, compared to when the vacation ad does not include visceral cues. Therefore, hypothesis one, relating to tempting visceral cues incongruent with long-term goals, is:

**Hypothesis 1** A goal-incongruent ad with (vs. without) visceral cues will have higher (lower) $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{Brand}}$, and PI when individuals have indulging thoughts.

**Goal-Congruent Temptations.** Individuals who engage in indulging thoughts are more distracted by alternative ways of achieving goals that are not clearly focused. Without a narrow focus on the goal specifically, willpower is lower and individuals are vulnerable to visceral cues that lead to alternative courses of goal success (Parks-Stamm et al. 2007). Visceral cues are frequently used to marketers to achieve an emotional reaction, and can be used in ads for more goal-consistent offerings, such as diet pills that promise an immediate reward of weight loss or a long-term gym contract designed to obtain the most profit from clients despite low value over the life of the contract. In indulging conditions, goals can be accomplished through multiple opportunities, even ones that are not in an individual’s best interest, such as the diet pills or long-term gym contract. Therefore, individuals in these conditions will still be vulnerable to visceral cues in goal-related contexts. Just as individuals react to goal-incongruent temptations, they will similarly behave toward goal-congruent temptations. So, when an individual on a diet sees an ad for a gym, he or she will be more likely to feel viscerally urged toward the gym ad when the ad contains visceral cues compared to when the ad does not have these visceral cues. Therefore, an individual will have higher attitudes toward the ad, attitudes toward the gym
brand, attitudes toward the gym membership, and have higher purchase intentions when the ad contains the visceral cues. Thus, hypothesis two follows:

**Hypothesis 2:** A goal-congruent ad with (vs. without) visceral cues will have higher (lower) \( \text{Att}_{\text{Ad}} \), \( \text{Att}_{\text{Product}} \), \( \text{Att}_{\text{brand}} \), and PI when individuals have indulging thoughts.

**Dwelling**

Those in the reality-only (dwelling) condition list negative realities and fantasize about those (Oettingen et al. 1995a).

**Goal-Incongruent Temptations.** Research indicates that individuals engaging in dwelling thoughts do not successfully follow through with their goals. When participants dwell on negative realities, they do not focus on the goal, and so are easily distracted by temptations (Oettingen et al. 1995a, 1995b, 2000). Temptations do not activate goal-related effort for the dwelling condition, meaning that those in the dwelling conditions are vulnerable to more visceral temptations. The presence of visceral cues in an ad will enhance ad-evoked attitudes for participants in the dwelling condition. Like the aforementioned example with the tempting vacation ad, an individual who sees a vacation ad will have higher attitudes toward the ad, attitudes toward the brand, attitudes toward the vacation, and higher purchase intentions when the individual sees an ad with visceral cues, compared to when the ad does not have visceral cues. Therefore, hypothesis three, relating to tempting visceral cues incongruent with long-term goals, follows:

**Hypothesis 3:** A goal-incongruent ad with (vs. without) visceral cues will have higher \( \text{Att}_{\text{Ad}} \), \( \text{Att}_{\text{Product}} \), \( \text{Att}_{\text{brand}} \), and PI when individuals have dwelling thoughts.
**Goal-Congruent Temptations.** Like with hypothesis two, there are times in which temptations come in the form of alternative ways of achieving a goal. In ads, visceral cues can align with a goal, such as health and wellness. In this case, a temptation, such as the long-term gym membership for weight loss, is congruent with the long-term goal but exacts a cost. At times like this one described, visceral cues still create a visceral, emotional urging, but also represent behavior that does not serve the long run benefits of the consumer. Like the indulging condition, the dwelling condition allows accomplishment of goals through multiple opportunities, even those that do not serve the individual in the long term. For instance, gym memberships are contractually designed to obligate an individual to spend money, even after they lose interest in the gym. Diet pills are not healthy options for an individual to use for weight loss but represent an easier option. Therefore, individuals in the dwelling condition will still experience stronger urgings for ads featuring goal-congruent products and services with visceral cues over those without visceral cues. As with the indulging condition, those individuals who experience dwelling thoughts will have higher attitudes toward the ad, attitudes toward the product, attitudes toward the brand, and higher purchase intentions when a goal-congruent ad has visceral features compared to when an ad does not. Hypotheses four follows:

**Hypothesis 4:** A goal-congruent ad with (vs. without) visceral cues will have higher $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{brand}}$, and PI when individuals have dwelling thoughts.

**Contrasting**
Goal commitment is strongest in the contrasting condition, which combines negative realities with positive fantasies (Stadler et al. 2010).

**Goal-Incongruent Temptations.** When participants in the contrasting condition set goal implementation intentions, participants become more focused on the goal, self-set or set by
others, so they are no longer distracted by temptations. Under these conditions, an individual will also continue to perceive the goal as attractive and think optimistically about the goal’s achievement (Oettingen and Gollwitzer 2001). This is consistent with hope theory (see Snyder 2000), where hope increases commitment to a goal and visceral cues can be overcome by hopeful thoughts (Oettingen and Gollwitzer 2002).

By contrasting the positive fantasy of success with the negative reality, an individual’s mental representations of the goals make goal-related thoughts more accessible and attended to. In effect, contrasting helps overcome problems of starting goal-directed behavior and goal continuity efforts, even in the face of unwanted situational cues (Oettingen and Gollwitzer 2001; Gollwitzer, Fujita, and Oettingen 2004). Contrasting thoughts enable individuals to recall negative realities related to a goal, which leads to more goal effort (Pak 2002). The discrepancy between the reality and expectations of success lead individuals recognize these negative realities (Oettingen and Gollwitzer 2003).

Mental contrasting sets implementation intentions, an essential aspect of binding goal commitment. Oettingen et al. (2000). Mental contrasting with implementation intentions (MCII) combines self-regulatory strategies, mental contrasting and implementation intentions, providing a strong strategy for behavioral change (Stadler, Oettingen, and Gollwitzer 2009). Implementation intentions are beneficial in fighting habits, though results for more complex behaviors such as smoking or eating unhealthy foods were mixed (see Holland, Aarts, and Langendam 2006; Webb, Sheeran, and Luszczynska 2009; Adriaanse, De Ridder, and de Wit 2009). Therefore, visceral cues will not produce a strong urging, as they do in the dwelling and indulging conditions. When an individual has a savings goal and engages in contrasting
thoughts, he or she will have similar thoughts to a vacation ad with visceral cues than a vacation ad without visceral cues. This means that attitudes toward the ad, attitudes toward the vacation, attitudes toward the brand, and purchase intentions will be similar when the ad has visceral cues and when it does not. Hypothesis five follows:

**Hypothesis 5:** A goal-incongruent ad with (vs. without) visceral cues will not differ on $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{Brand}}$, and PI when individuals have contrasting thoughts.

As previously mentioned, temptations activate goal-related effort for the contrasting conditions, but not the indulging or dwelling conditions. Those individuals imagining using indulging and dwelling thought types are vulnerable to temptations whereas an individual who imagines using contrasting thoughts will not feel an increased urge to buy a product or service that uses visceral cues. Thus, visceral influences will have a heightened effect on those individuals in the indulging and dwelling conditions compared to those individuals in the contrasting condition because mentally contrasting triggers goal effort that does not happen for the other thought conditions. In other words, those who engage in either indulging or dwelling thoughts and exposed to an ad, such as the vacation ad, with visceral cues will have higher attitudes toward the ad, attitudes toward the vacation, attitudes toward the brand, and purchase intentions compared to an individual using a contrasting thought type who is exposed to the same ad. Therefore, hypotheses six is:

**Hypothesis 6:** Individuals with dwelling thoughts (and indulging thoughts) have higher $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{Brand}}$, and PI when goal-incongruent ads have visceral cues than individuals with contrasting thoughts.
**Goal-Congruent Temptations.** In the contrasting condition, individuals focus on specific goals and ignore temptations and alternative ways of achieving a goal due to implementation intentions. Implementation intentions are especially helpful when a goal is more difficult (Gollwitzer and Brandstatter 1997; Gollwitzer et al. 2004) and are broken down into two distinct processes: the identification of a situation where an opportunity to act consistent with a goal is present (if-process) and the automatic response (then-process) (Gollwitzer 1993, 1999; Gollwitzer, Bayer, and McCulloch 2005). The if-process enhances goal commitment and activates goal-congruent behavior by selecting how an individual sees an action as relevant to success in his or her goals (Gollwitzer, Bayer, Steller, and Bargh 2004). The then-process works because upon encountering a cue, the individual is able to respond in a goal-consistent manner immediately, automatically, and efficiently (Bargh 1994).

The two processes in implementation intentions demand different areas of the brain (Gilbert, Gollwitzer, Cohen, Oettingen, and Burgess 2009). While other individuals, such as those experiencing indulging or dwelling thoughts, may take different courses of actions, rather than the one specified, to pursue their goals (Gollwitzer et al. 2004), individuals in the mentally contrasting condition would not pursue alternative strategies to achieve their goals. In indulging and dwelling conditions, the if-then process is not activated. Instead, individuals in the contrasting condition have a more narrow commitment to their goal, and disregard alternative opportunities. By focusing the mind, individuals who engage in contrasting thoughts will not see gym advertisements or diet pills as alternative ways of losing weight, unlike those in indulging and dwelling frames of mind. These offerings are excluded. Therefore, those
individuals in the contrasting condition will react similarly to an ad for a gym when the ad has visceral cues and when it does not. Their attitudes toward the ad, attitudes toward the brand, attitudes toward the gym, and purchase intentions will be similar for both types of ads. Visceral cues in ads that are consistent with goals will not influence individuals in contrasting modes of thought. By the same token, an individual’s attitudes and intentions in the contrasting condition will be lower than those in the dwelling or indulging conditions, when exposed to an ad with visceral cues. Thus, hypotheses seven and eight follow:

**Hypothesis 7:** A goal-congruent ad with (vs. without) visceral cues will not differ on $Att_{Ad}$, $Att_{Product}$, $Att_{brand}$, and PI when individuals have contrasting thoughts.

**Hypothesis 8:** Individuals with dwelling thoughts (and indulging thoughts) have higher $Att_{Ad}$, $Att_{Product}$, $Att_{brand}$, and PI when goal-congruent ads have visceral cues than individuals with contrasting thoughts.

**The Mediating Role of Self-Efficacy**

When an individual sets a goal, he or she will inevitably face several temptations, either contrary to the goal or temptations involving an alternative way of accomplishing a goal. In both cases, an individual has to have willpower to reject the temptation and continue to pursue the goal. For the purpose of this dissertation, willpower is operationalized as self-efficacy, the belief in the self as capable of overcoming obstacles to achieve a desired result (Schwarzer and Renner 2000).

Self-efficacy results in efforts made toward a goal (Gist and Mitchell 1992). Schwarzer and Renner (2000) suggest self-efficacy is the primary mechanism through which individuals
can overcome visceral temptations. Prior research finds that two conditions are necessary for individuals to overcome a visceral urge: individuals, first, have to set a goal relative to a temptation and, second, must have a sufficient level of self-efficacy (Bandura 1982; Metcalfe and Mischel 1999; Nordgren, van Harreveld, and van der Pligt 2009; Yang, Carmon, Kahn, Malani, Schwartz, and Volpp 2012). Psychologically, self-efficacy works by reducing the desire of a reward and changing motivations (Hoch and Loewenstein 1991). In other words, the individual has to ascribe high levels of resources and restraint to the self and assign the situation as undesirable. An individual on a diet would think he/she has the mental resources to overcome a temptation of chocolate cake, and recognize the situation as a temptation working against the individual’s dieting goals.

Some antecedents of self-efficacy include verbal persuasion, experience, assessment of personal resources and constraints, and assessment of situational resources and constraints. So, high personal resources for a goal, low constraints to achieving a goal, positive persuasive self-talk, and prior positive experiences lead individuals to experience higher levels of self-efficacy. When personal resources are low, constraints to achieve a goal are high, negative self-talk, and lacking prior experience, a person will then have low self-efficacy. While the indulging and dwelling thought provide inaccurate constraints and personal resources, contrasting thought type highlights constraints with personal resources available to overcome them, setting positive implementation intentions Therefore, the individual engaging in contrasting thoughts should feel more confident about his/her goal and better able to overcome temptations related to the goal. Though, those in the indulging or dwelling thought type, because they do not experience imagining both resources and constraints, individuals feel either over-prepared or
under-prepared to complete a goal. Next, the interaction between the temptations and imagination thought type impacts attitudes because of self-efficacy.

When an individual has an adequate amount of self-efficacy, visceral temptations do not induce heightened emotional arousal as usual (Bandura 1982). Researchers Trope and Fishbach (2000) test the effect of self-efficacy on short-term temptations and long-term goals. When exposed to shorter or extended food abstinence, participants set a higher penalty for themselves than for others. When participants set higher penalties for themselves in extended fasting scenarios, research recorded increased self-efficacy levels. When participants had high levels of self-efficacy, they were more willing to engage in activities despite physical discomfort (Trope and Fischbach 2000). Therefore, individuals who experience urgings contrary to their long-term goals, such as considering a slice of chocolate cake when on a diet, will undergo an uncomfortable mental tug of war between the urging of the cake and the long-term goal. An individual with enough self-efficacy to overcome the urgings felt from seeing the chocolate cake does so because of the willingness to pursue long-term dieting goals and avoid the penalty of cheating on his/her diet. Ultimately, this may mean weight gain.

For individuals to experience the advantages of having higher self-efficacy, they have to set appropriate goals, monitor their goals, and put forth effort toward the goal (Baumeister and Heatherton 1996). Trope and Fischbach (2000) find that self-efficacy can be manipulated in many ways, including motivations based on individual and societal values. Planning has been found to be a helpful strategy to successfully pursue goals (Gollwitzer, 1999), though other researcher suggests planning can be detrimental in several instances (e.g. De Ridder et al. 2011). For planning to raise self-efficacy, individuals have to believe in their initial efforts to and
make progress toward their goals. Both initial beliefs and continued effort are critical to goal-related behaviors (Hill & Ward 1989; Schwarzer and Renner 2000).

Oettingen’s research establishes multiple aspects of self-efficacy as a mediator between the imagination conditions in FTR and goal progress. For instance, effort from self-efficacy (Oettingen and Mayer 2002) and energization from self-efficacy (Oettingen, Mayer, Sevincer, Stephens, Pak, and Hagenah 2009; Servincer, Busatta, and Oettingen 2014) mediate the relationship between imagination thoughts and goal commitment. Furthermore, higher self-efficacy makes an individual’s future seem more in line with reality (Kappes and Oettingen 2014). As a kind of mental rehearsal, imagination enhances feelings of self-efficacy by making a goal feel more achievable, prompting more realistic understanding of visceral temptations, and setting new neural pathways essential for actual behavior change. Imagining helps consumer self-regulate their emotions and engage in critical thought, even in the presence of related visceral cues (Gist and Mitchell 1992; Taylor et al. 1998).

To increase self-efficacy, an individual has to activate bodily, mind, and emotional resources (Bandura 1986). Emotional resources are exhausted when visceral temptations are present, which then lead to mind and bodily reactions contrary to an individual’s long-term interests (Loewenstein 1996). In order to protect the self against visceral temptations, an individual must possess high enough levels of self-efficacy (Gist and Mitchell 1992). Self-efficacy can be enhanced through self-esteem (Locke, Frederick, Lee, and Bobko 1984), creating positive expectations of individual performance in a situation, seeing oneself successfully perform on his/her goal, seeing someone similar succeed at the goal, verbal persuasion, and visceral reactions associated with the threat of failure and exhilaration of success (Eden and Kinnar
The three imagination thought type conditions, indulging, dwelling, and contrasting, manipulate self-efficacy levels in individuals, which then determines how individuals will respond to promotional advertising with or without visceral cues.

Indulging Imagination Thought Types

In the indulging imagination thought type condition, individuals consider positive thoughts associated with the reward of achieving a goal (Oettingen 2000). Therefore, individuals with indulging thoughts imagine they successfully performing a goal, and thus experience the visceral reactions of success. Indulging creates positive expectations of success with the goal. These are the best ways to increase self-efficacy (Eden and Kinnar 1991). However, this does not mean that an individual engaged in indulging thoughts will walk away from a visceral temptation.

On the contrary, too high self-efficacy produces overconfidence, leaving individuals unprepared for visceral temptations (Baumeister, 1989; Burger and Burns 1988; Gollwitzer and Kinney 1989; Kipnis 1972; Loewenstein 1996, 2005; Nordgren et al. 2007, 2009). Overestimation of self-ability can be destructive (Loewenstein 2000b) because individuals unrealistically overestimate their willpower (Brown 1986; Langer 1975; Lewinsohn, Mischel, Chaplin, and Barton 1980), and subconsciously put themselves in situations where they experience more temptations. It is through this added exposure to visceral temptations that individuals succumb to temptations (Nordgren et al. 2009). Inaccurate assessment of personal and situational resources leave an individual with indulging thoughts feeling proud, and vulnerable to the arousing effects from more visceral temptations (Gist and Mitchell 1992; Oettingen 2000).
**Dwelling Imagination Thought Types**

In the dwelling imagination thought type condition, individuals only consider negative thoughts associated with attempting to achieve a goal, the obstacles to goals (Oettingen 2000). Therefore, individuals with dwelling thoughts imagine they experience temptations whilst pursuing a goal, and thus do not experience the visceral reactions of goal success. Dwelling thoughts create negative expectations of success with the goal. In sum, dwelling thoughts do not involve any of the mechanisms essential for increasing self-efficacy (Eden and Kinnar 1991). Therefore, an individual engaged in dwelling thoughts will not walk away from a visceral temptation. With negative thoughts and negative expectations of success, individuals participating in dwelling will have low levels of self-efficacy, and fall prey to visceral temptations.

Too low self-efficacy leads to unpreparedness to overcome temptations because individuals do not feel they have the means to achieve their goals (Polivy & Herman 2000), especially when making concrete plans (Townsend and Liu 2012). When participants dwell on negative realities, they do not focus on the goal, and so are easily distracted by temptations (Oettingen et al. 1995a, 1995b, 2000). Upon experiencing visceral temptations, individuals with low self-efficacy will be vulnerable to the temptations because of the reward of the temptation. These individuals fail at their goals because they do not believe they can achieve the long-term rewards promised by the goal, consistent with the self-efficacy literature (Gist and Mitchell 1992).
Contrasting Imagination Thought Types

In the contrasting imagination thought type condition, individuals consider both positive thoughts associated with the reward of achieving a goal and negative obstacles that can get in their way (Oettingen 2000). Therefore, individuals with contrasting thoughts imagine they successfully performing a goal, and thus experience the visceral reactions of success. At the same time, they imagine the obstacles to the goals. Contrasting also creates positive expectations of success with the goal via seeing the self perform the goal, yet recognizes that negative realities can impede goal success (Eden and Kinnar 1991). These thoughts lead individuals to have moderately high levels of expectations. Self-efficacy for those in contrasting thoughts will be higher than those in dwelling thoughts but lower than those in indulging thoughts. At moderately high levels, an individual is more prepared to deal with temptations, even visceral ones. On the other hand, self-efficacy is not too high to provide false expectations.

Therefore, to achieve long-term goals, there is an optimal level of self-efficacy best for goal regulation (Oettingen 1996, 1997). In other words, self-efficacy has to be moderately high, not too high or too low, so that visceral temptations do not become obstacles to goal progress (Oettingen 2000). Imagining a goal through contrasting leads to new learning. Learning provides chronic activation of cold thinking nodes when certain hot notes are activated by visceral temptation. Self-efficacy refocuses attention to the long-term goals via these cold nodes (Metcalfe & Mischel, 1999). So, when individuals in contrasting thoughts with visceral cues, they will process the information as though the temptations did not possess visceral cues.
Having a greater impact on those in the indulging and dwelling conditions, the visceral cues will not similarly urge individuals in the contrasting condition to buy the product.

**The Interaction of Imagination Thought Type and Visceral Cue Presence**

Accordingly, the present study proposes that the influence of the interaction between the presence (absence) of visceral cues and thought patterns on key consumer response variables is a function of the accessibility of some or all of the antecedents of self-efficacy that ultimately stems from imagination thought described by Oettingen (2000). In this way, long-term rewards from achieving goals may become more salient. When consumers have too high or too low levels of self-efficacy, consumers cannot think critically about future goals and are still susceptible to visceral rewards in the present (Loewenstein 1996, 2000).

Further, I propose that self-efficacy manifests not just in positive efforts made in the direction of a goal, but also through decisions to decline visceral temptations. For instance, a person may have a savings goal and come across an ad for a vacation, exacting an immediate monetary cost. The visceral temptations in the vacation ad, such as the promotional offer and testimonials from prior vacationers, can be overridden through appropriate levels of self-efficacy. This individual can obtain an adequate level of self-efficacy to overcome such temptations through the contrasting type of imagination. The other types of imagination thought, dwelling and indulging, will not change self-efficacy to a beneficial level. Therefore, self-efficacy is proposed to be the underlying mechanism responsible for the interaction of imagination and temptation on the subsequent behavior, such as choosing to indulge in the vacation or walk away.
In the above example, when self-efficacy is at a moderately high level, and individual will not feel a visceral urge to take advantage of the vacation deal. So, whether the vacation ad has visceral cues or not, an individual will hold similar attitudes the ad. Additionally, the presence or absence of visceral cues in the vacation deal temptation will not change attitudes toward taking the vacation either. In either type of ad, the consumer will have the same attitudes about the brand. Finally, the presence of more visceral cues in the vacation ad will not make an individual more likely to have intentions to purchase such a vacation. On the other hand, when self-efficacy is too high or too low, an individual will feel visceral urgings when the vacation ad has more visceral cues compared to when the ad does not have these cues. These visceral urgings will cause an individual to have higher attitudes and purchase intentions. Thus, hypothesis 9 follows:

**H9: Self-Efficacy mediates the relationship between the interaction of thought condition and Visceral Cues on Att\textsubscript{Ad}, Att\textsubscript{Product}, Att\textsubscript{brand}, and Pl.**

**Overview of the Research Model, Hypotheses, and Studies**

The focus group and first three studies establish baselines for studies three through six. Figure 2.1, below, provides an overview of studies four through six, described later in the methodology, the studies which examine each hypothesis, and the overall model of prediction. Prior work on TVI has established a main effect of visceral cues. That is, the presence of visceral cues enhances attitudes toward an ad, attitude toward the product in the ad, attitudes toward the brands, and purchase intentions. Study 1 establishes the main effect of imagination regulatory though on visceral temptations in an ad opposed to long-terms goals. Study 2 and 3
likewise identify a main effect from imagination regulatory throught, but for an ad with a temptation consistent with long-term goals. According to the hypotheses, the imagination regulatory thought (contrasting, indulging, and dwelling) will moderate the relationship between visceral cues and ad-evoked thoughts. Specifically, individuals in the contrasting or indulging conditions will still have higher ad-evoked thoughts for both goal-congruent and goal-incongruent ads with visceral cues (versus with visceral cues absent). However, visceral cues will not impact individuals engaged in mentally contrasting. In other words, individuals’ ad-evoked thoughts will not differ for either goal-congruent or goal-incongruent ads between ads with and without visceral cues. Study 4 will examine the interaction of visceral cues and imagination regulatory thought on goal-incongruent ads, assessing hypotheses 1 through 4. Study 5 will examine the interaction of visceral cues and imagination regulatory thought on goal-congruent ads, assessing hypotheses 5 through 8. Additionally, study 5 will measure self-efficacy in order to examine hypothesis 9. Study 6 will replicate Study 5 in a different context to add generalizability, in addition to manipulating self-efficacy to evaluate the overall model and the role that self-efficacy plays in FRT as well as TVI, adding robustness to the findings.
* Study 6 examines the model comprehensively by manipulating self-efficacy and treating it as a moderator.
CHAPTER 3 METHODOLOGY AND ANALYSES

Chapter 1 established the key research questions for the study and specified the contributions of the study to public policy and pro-social marketing. Chapter 2 provides a detailed explanation of TVI, FRT, self-efficacy, and how the three streams of literature are related, putting forth a theoretical model for study and hypotheses regarding the key research questions. Chapter 3 discusses the pretest and main experiments for the dissertation study. Sample frames, experimental design, manipulation checks, data collection, analysis, results, and discussions are provided. The goal of the chapter is to investigate the imagination as a tool which moderates how individuals respond to tempting visceral influences, depending upon whether the imagination includes either or both of: the future indulging of goal success and/or the negative realities that prevent success.

Experimental Procedure

Imagination thought type and visceral cue presence have two and three levels, respectively, and are all manipulated factors. Self-efficacy is both a measured factor and a manipulated factor with two levels. Study 1 is a 3 (Imagination Thought Type: Contrasting vs. Dwelling vs. Indulging) x 1 between subjects design, examining goal-incongruent temptations. Study 2 is a 3 (Imagination Thought Type: Contrasting vs. Dwelling vs. Indulging) x 1 between subjects design, examining goal-congruent temptations. Study 3 is a follow up to study 2, a 2 (Imagination Thought Type: Contrasting vs. Dwelling) x 1 between subjects design, examining goal-congruent temptations. Study 4 is a 2 (Visceral Cue: Presence vs. Absence) x 3 (Imagination Thought Type: Contrasting vs. Dwelling vs. Indulging) between subjects design, examining goal-
incongruent temptations. Study 5 is a 2 (Visceral Cue: Presence vs. Absence) x 3 (Imagination Thought Type: Contrasting vs. Dwelling vs. Indulging) between subjects design, examining goal-congruent temptations, and assessing self-efficacy as a measured mediator. Study 6 is a 2 (Visceral Cue: Presence vs. Absence) x 3 (Imagination Thought Type: Contrasting vs. Dwelling vs. Indulging) x 2 (Self Efficacy: High vs. Low) between subjects design, examining goal-congruent temptations. In Study 5, self-efficacy is captured using Schwarzer and Jerusalem’s (1995) 7-point, 10-item Likert scale. Visceral cue presence is a manipulated variable with advertisements with visceral cues present versus advertisements with visceral cues absent. Imagination thought type is a manipulated variable by priming participants into one of three conditions of contrasting versus dwelling versus indulging, with a cover story about how daydreaming can benefit personal goals.

To strengthen the effectiveness of the manipulations, one focus group and studies 1 through 3 were conducted. Subsequently, studies 4 through 6 were conducted to address the hypotheses. Fictitious brands were chosen to control for brand loyalty effects. The manipulated advertisements were created to mirror real advertisements in each of the studies. The pretest and main studies were all conducted with a significance level of 0.05. The next section contains a discussion of the pretests and main studies, and changes made based on the results.

Focus Group: Savings Goals

The focus group consisted of a volunteer sample of undergraduate students from a large Southwestern university who were enrolled in marketing classes. During the thirty-minute long focus group session led by myself, I engaged the group in a discussion focusing on the subject of
debt and savings. The prewritten questions covered topics on savings, such as how much students tended to save on a monthly basis, realistic savings goals, purposes for saving money, temptations preventing saving money, and their feelings about savings and debt.

Notes were recorded during and post-analysis to evaluate the responses. The comments and opinions expressed were evaluated holistically to determine recurring themes revealed in the discussion. The focus group, taking place on November 18, 2013, consisted of four men and five women in the UNT classroom just before the start of class.

The resulting themes reveal that most of the participants were not in debt. If they were in debt, they owed money for student loans. Credit card debt was negligible. Furthermore, participants indicated that they would like to have some money saved by the time they graduated, but, realistically, could only save about $30 to $60 per month. While they often did not have time to take vacations, many felt that a good vacation would lead them to spend money unnecessarily. Though, they all felt that saving money would be an important goal to have for their futures.

**Study 1: Savings Manipulations**

The first study was conducted to support the findings from the focus group, to test a savings goal of $700 for a year, ensure that the manipulations were successful, and establish a main effect for imagination regulatory thought. Imagination thought is a manipulated independent variable with three levels: indulging, dwelling, and contrasting.
**Goal Priming Instructions**

Undergraduate student subjects read priming instructions, first:

*Having an emergency fund is extremely important, especially for students about to graduate and start their first job. An emergency fund can help take care of medical bills, moving expenses, unemployment periods, and the unplanned emergencies in life. Studies indicate that students should have at least $700 in an emergency fund by the time they graduate from college.*

Following Oettingen (2012), participants received priming instructions for either the contrasting, dwelling, or indulging conditions.

**Indulging Condition Instructions**

In the indulging condition, participants were first instructed to “List 4 positive aspects/futures you imagine would occur because you saved this $700” and then to “Rank the 4 positive aspects that you imagine would occur from saving $700 over the next year, by order of importance (how significant will each be?) 1= most exciting aspect of the future, 4= least exciting aspect of that future.”

Following these instructions, participants in the indulging condition were told to “Copy your #2 ranked positive aspect/future here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked positive aspect/future here” and then were asked to indulge in their fantasies with the same script as their second ranked future.
**Dwelling Condition Instructions**

In the dwelling condition, participants were first instructed to “List 4 negative aspects that may prevent you from saving $700 over the year” and then to “Rank the 4 negative aspects that may prevent you from saving $700 over the year, by order of importance (how significant of a temptation will each be?) 1= most tempting, 4= tempting.”

Following these instructions, participants in the dwelling condition were told to “Copy your #2 ranked negative aspect/temptation here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked negative aspect/ temptation here” and then were asked to indulge in their thoughts with the same script as their second ranked temptation.

**Contrasting Condition**

In the contrasting condition, participants were first instructed to “List 4 positive aspects/ futures you imagine would occur because you saved this $700” and then to “List 4 negative aspects that may prevent you from saving $700 over the year.” Afterward, participants were given instructions to “Rank the 4 positive aspects that you imagine would occur from saving $700 over the next year, by order of importance (how significant will each be?) 1= most exciting aspect of the future, 4= least exciting aspect of that future” and “Rank the 4 negative aspects
that may prevent you from saving $700 over the year, by order of importance (how significant of a temptation will each be?) 1= most tempting, 4= tempting.”

Next, participants in the contrasting condition were told to “Copy your #1 ranked positive aspect/future here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked negative aspect/ temptation here” and then were asked to indulge in their thoughts similarly as with the positive aspect, describe in the previous sentences.

Manipulation Check Questions

Following the imagination thought writing task, participants were given a sentence completion task as a manipulation check. They were advised, “Please carefully read all sentence stems below. Then, complete the four sentence stems- and only those four that match best how you think about saving $700 over the next year. Pick only 4 and complete the sentences. Pick the 4 that stand out most to you.” Four sentences suggested that plans were being formed and four did not require the formulation of plans. Table 3.1 below, shows the sentence stems.
### Table 3.1 Formulating Plans Sentence Stems

<table>
<thead>
<tr>
<th>Sentence stems suggesting the formulation of plans</th>
<th>Sentence stems not suggesting the formulation of plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specifically, I will...</td>
<td>All in all, I will...</td>
</tr>
<tr>
<td>Until... I will...</td>
<td>In general, I will...</td>
</tr>
<tr>
<td>If... then I will...</td>
<td>In principle, I will...</td>
</tr>
<tr>
<td>I will not... but instead...</td>
<td>I will not...</td>
</tr>
</tbody>
</table>

As a manipulation check, the number of sentence stems participants completed leading to the formulation of plans were added together, so that participants’ sentence completion score ranged from 0 (no plan formulation sentences completed) to 4 (all four plan formulation sentences completed), as done by Oettingen (2012). Next, participants were asked “To what extent does saving $700 depend on external circumstances and “To what extent does saving $700 depend on personal responsibility?,” ranging from 1 (not at all) to 7 (totally), included as a covariate. Also, to control for an individual’s tendency to plan or not, two questions using a 7 point Likert scale included, “I constantly plan for the future” and “I prefer to make up my own future as I go.”

### Dependent Variables

Participants were then instructed to look at the advertisement as if they saw it in their email inbox. The subjects were also verbally instructed to flip the advertisement over and immediately complete the questionnaire. Subjects were told that there was no time limit to look at the ad, that they should consider the ad as long as they normally would consider a similar email in their inbox, and that there were no correct or incorrect responses to the ad. As an opportunity to test the ad for Study 4, all participants saw the ad with visceral cues for a
fictional spring break cruise from BigCruise Company (see Appendix A for the modified version). In this ad, the visceral cues consisted of a promotional deal of 10% if the consumer responded within a valid time period and customer testimonials.

A cruise was selected for this experiment as the type of vacation appropriate for a tempting, goal-incongruent advertisement, given the focus group study results. With the university location approximately five hours away from a cruise port, a cruise was selected as a relevant and inexpensive vacation capable of tempting student participants. The dependent variables for this experiment included attitude toward the cruise ($\alpha = .958$), attitude toward the ad ($\alpha = .941$), and purchase intentions ($\alpha = .984$), reflecting an average of the 7-point scale items put forth by Spears and Singh (2004) and Lavack et al. (2008). All scales are given in Appendix B. Two covariates were also included to account for cruise history, using a 7-point Likert scale.

**Analysis of Study 1 Results**

A total of ninety-four usable responses were collected from a large Southwestern University for this initial face-to-face experiment. The sample consisted of 55.3% male ($n=52$) business students with a mean age of 21.

Before assessing the effects of the independent variables on the dependent variables, manipulation checks were run using a one-way ANOVA. For the manipulations to be successful, the contrasting condition was expected to have a higher sentence completion score than the indulging or dwelling conditions. The indulging and dwelling conditions were collapsed for the manipulation checks and use a one-tailed p-value test. In accord with the expectations for the
manipulation, those in the contrasting condition had a greater sentence completion score ($M_{\text{contrast}} = 2.00$) than the other conditions ($M_{\text{other}} = 1.69$; $F(1, 92) = 2.55$; $p < 0.05$). Therefore, the manipulation of imagination thought type was successful.

Consistent with FTR, it is anticipated that participants in the indulging and dwelling conditions would have higher attitudes toward the ad, attitudes toward the cruise, and purchase intentions than those participants primed with the contrasting condition. The dependent variables were coded so that a high number indicates higher attitudes and purchase intentions. ANOVAs were used to examine differences among the three conditions, using $p$-values of one-tail tests since contrasting thoughts are expected to be lower than the other two conditions.

Attitude toward the cruise, with all of the covariates, including demographic information, provided a non-significant $p$-value. For attitudes toward the cruise, directional support exists, revealing that those in the contrasting condition had marginally lower attitudes toward the cruise ($M_{\text{contrast}} = 3.19$) than those in the dwelling condition ($M_{\text{dwelling}} = 3.72$; $F(4, 57) = 1.70$; $p < 0.09$) and those in the contrasting condition ($M_{\text{indulging}} = 3.45$; $F(4, 58) = 1.82$; $p < 0.09$). None of the covariates of personal responsibility, external attributions, or demographics were significant. Attitude toward the ad was marginally significant. Those in the contrasting condition had significantly less attitudes toward the ad ($M_{\text{contrast}} = 3.67$) than individuals in the dwelling ($M_{\text{dwelling}} = 4.47$; $F(4, 57) = 3.67$; $p < .03$) condition, whereas contrasting versus indulging was marginal ($M_{\text{indulging}} = 4.07$; $F(4, 58) = 1.58$; $p < .1$) condition. None of the covariates were significant. Purchase intentions similarly provided a pattern where those in the contrasting condition ($M_{\text{contrast}} = 2.13$) had lower purchase intentions than those in the dwelling ($M_{\text{dwelling}} = \ldots$
2.74; F(4,57)=2.24; p<.07) condition and those in the contrasting condition had lower purchase intentions than those in the indulging (M_{indulging}= 2.25; F(4,58)= 0.82, p< 0.18) condition, directionally supporting the hypothesis. Once again, none of the covariates were significant.

The three dependent variables were analyzed as a second-order construct (α = .889). This time, only significant covariates were included in the one-way ANOVA of the second-order dependent variable. Gender and ethnicity became insignificant covariates whereas importance was still significant (p< 0.001). For the dependent variable, the contrasting condition was moderately significantly lower (M_{contrasting} = 2.99) than either the dwelling (M_{dwelling} = 3.64; F(4,57)=2.86; p< .04) or indulging (M_{indulging} = 3.26; F(4,58)= 1.78; p< 0.09) conditions. These results are provided below in Table 3.2 and Figure 3.1 below.

### Table 3.2 Summary of Study 1 Results

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Manipulation</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>(\eta^2)</th>
</tr>
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<tbody>
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<td></td>
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<td></td>
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<tr>
<td><strong>Attitude toward the Cruise</strong></td>
<td>Contrasting</td>
<td>33</td>
<td>3.19</td>
<td>1.57</td>
<td>1.70</td>
<td>.09</td>
<td>.250</td>
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<td>Dwelling</td>
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<td>1.92</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>Contrasting</td>
<td>33</td>
<td>3.19</td>
<td>1.57</td>
<td>1.82</td>
<td>.09</td>
<td>.264</td>
</tr>
<tr>
<td></td>
<td>Indulging</td>
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<td>3.45</td>
<td>1.58</td>
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<tr>
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<td>1.46</td>
<td>3.67</td>
<td>.03</td>
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<tr>
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<td>4.47</td>
<td>1.67</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Contrasting</td>
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<td>3.67</td>
<td>1.46</td>
<td>1.58</td>
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<tr>
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<td>4.07</td>
<td>1.65</td>
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<td></td>
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<tr>
<td><strong>Purchase Intentions</strong></td>
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<td>33</td>
<td>2.13</td>
<td>1.57</td>
<td>2.24</td>
<td>.07</td>
<td>.313</td>
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<tr>
<td></td>
<td>Dwelling</td>
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<td>2.74</td>
<td>1.93</td>
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<tr>
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<td>Contrasting</td>
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<td>1.57</td>
<td>0.82</td>
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<td>.144</td>
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<td>1.45</td>
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<td><strong>Attitude Second-Order Construct</strong></td>
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<td>1.38</td>
<td>1.78</td>
<td>.09</td>
<td>.259</td>
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<tr>
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<td>Indulging</td>
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<td>3.26</td>
<td>1.36</td>
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</tbody>
</table>
Summary of Study 1 Results

The results of the experiment indicate that the manipulation of the imagination thought type was successful and had an influence on the dependent variables, consistent with the hypotheses. However, the visceral cues in the advertisement should be enhanced to strengthen the effect of visceral cues on the dependent variables. The font size of the promotional deal was enlarged and the customer testimonials were highlighted with a border.

At the end of the questionnaire, the survey invited participants to provide information about the realism of a $700 savings goal, current debt amounts, and realistic savings goals. Of those who responded, the average debt was less than $250, and ranged from zero to $15,000. A clear majority felt the $700 savings goal was realistic, and, on average, felt that saving $600 was a reasonably easy amount in a year. Their savings goals for a year ranged from $5 to 2.5 3 3.5 4

Indulging  Dwelling  Contrasting

Figure 3.1 Results of Study 1 on Attitude Dependent Variable
$7,500. Based on these results, student debt is minimal and savings goals of $700 were realistic.

Therefore, study 1 provides adequate results to move forward with Study 4.

Study 2: Weight Loss Context

The second experiment was conducted to assess weight loss goal manipulations. Imagination thought was the manipulated independent variable, manipulated into three levels as in study 1: indulging, dwelling, and contrasting. For this experiment undergraduate student subjects were given a weight loss goal of 10 pounds and the following priming instructions:

The issue of obesity among Americans has received increasing attention. While the myth of the Freshman 15 (i.e. new college students gain 15 pounds their first year) is not true, weight gain does typically exist in college. In fact, freshman weight gain is 5.5 times greater than that experienced by the general population. Over 50% of freshmen gain weight in college. Of those who gain weight, college students put on an additional 6 pounds. Throughout college, students typically gain 12 pounds, on average.

Given the importance of keeping a healthy body weight, please respond to the following questions.

After the weight loss prompt, participants received priming instructions for either the contrasting, dwelling, or indulging conditions like in study 1 except that the goal reflected losing 10 pounds. After completing the imagination thought type-writing tasks, the participants completed four sentence stems, as the manipulation check questions, and covariate questions on external and personal responsibility like in study 1. Participants were told to look at the ad as if they received it in their email inbox. The subjects were also instructed to flip the advertisement over and immediately complete the questionnaire. Subjects were told that there was no time limit for the ad, and that they should consider the ad as long as they would normally, as there are no correct or incorrect responses to the ad. In this case, the ad was a
visceral weight loss solution ad, a temptation consistent with a weight loss goal. The ad is placed in Figure 3.2.

**Figure 3.2 Weight Loss Advertisement for Study 2**

The same dependent variables were included: attitude toward the diet pills ($\alpha = .949$), attitude toward the ad ($\alpha = .941$), and purchase intentions ($\alpha = .989$). The second-order construct also had a sufficiently high alpha ($\alpha = .886$).
Analysis of Study 2 Results

A total of sixty-four usable responses were collected from a large Southwestern University for this initial face-to-face experiment. The sample consisted of 59.4% male (n=38) business students with a mean age of 20.

Before assessing the effects of the independent variables on the dependent variables, manipulation checks were run using a one-way ANOVA. For the manipulations to be successful, the contrasting condition was expected to have a higher sentence completion score than the indulging or dwelling conditions. The indulging and dwelling conditions were collapsed for the manipulation checks and to simplify the analysis to a one-tailed p-value test. However, those in the contrasting condition did not have a significantly greater sentence completion score ($M_{\text{contrasting}}= 1.86$) than the other conditions ($M_{\text{other}}= 1.76$; $F(1,62)= 0.18$; $p< 0.33$). Therefore, the manipulation of imagination thought type was not successful. Dependent variables were, thus, not analyzed using one-way ANOVAs.

Summary of Study 2 Results

The results of this study were somewhat muddled and showed there is no consistent weight loss need, given the absence of significant differences among manipulations. The results of the Study 2 indicate that the manipulation of the imagination thought type was not successful.

At the end of the questionnaire, the survey invited participants to provide information about the realism of a 10 pound weight loss goal, current health status, and realistic weight loss
goals. Of those who responded to these questions, individuals indicated the need to lose 22 pounds in a year, on average, with responses ranging from 5 to 104 pounds. Furthermore, when it came to perceptions of weight loss needed, individuals indicated that on average, they felt like they needed to lose less than 18 pounds, with answers ranging from zero to 140. Over 35% of respondents provided an answer of zero for perceived weight loss needs. Upon examining the written content, many participants indicated the desire to gain weight or varied health goals, such as running a marathon. Therefore, study 3 extends the same health and wellness context, but requires individuals to input their own health and wellness goals, so that the manipulations would be more relevant.

**Study 3: Improving the Health and Wellness Context**

Study 3 was conducted as a follow-up to the Study 2, asking participants to self-select a health and wellness goal, as utilized across several research projects of Oettingen (2000). Imagination thought is a manipulated independent variable with only two levels to assess manipulation success: dwelling and contrasting. Undergraduate student subjects read priming instructions first:

**Goal Priming Instructions**

Undergraduate student subjects received a folder with priming instructions, an advertisement, and attitude measures. First, participants read the priming instructions before providing a self-assigned goal:

*Think about a goal or a resolution you’ve considered lately. Maybe it has to do with maintaining your good health. It might have to do with losing weight or*
getting in shape. Or, it could have to do with enhancing your strength, gaining weight, or becoming more involved/improving in a physical activity. After thinking about this, write down a health & wellness-related goal that you would want to accomplish within the next year.

Next, participants were asked to write in their most important health and wellness goal that they would like to accomplish within the year, as specific a goal as possible. Following their self-assigned goal, participants were randomly assigned an imagination thought type condition, as done by Oettingen (2012), for either the contrasting of dwelling conditions. The instructions for both conditions were similar to those described in study 1 and 2, except that the words “your goal” replaced the specific goal from study 1.

Following the manipulated imagination thought type, participants were provided with a sentence completion task as the manipulation check using the same instructions as in study 1, but for their goal. Once again, the number of sentence stems participants completed leading to the formulation of plans were summed, and ranged from 0 (no plan formulation sentences completed) to 4 (all four plan formulation sentences completed), as done by Oettingen (2012). Next, participants were asked “To what extent does achieving your goal(s) depend on external circumstances and “To what extent does achieving your goal(s) depend on personal responsibility?,” ranging from 1 (not at all) to 7 (totally). Tendency for planning was also included as a covariate, as in study 1.

After completing the sentence completion task, participants were instructed to look at an advertisement for a gym membership, as if they received it in their email inbox. Furthermore, they were verbally instructed to flip over the advertisement and complete the questionnaire. Subjects were given unlimited time to examine the ad, and told that there were no correct or incorrect responses. As an opportunity to pre-test the ad for study 6, all
participants saw the ad with visceral cues for a fictional gym in the area (see Appendix A). In this ad, the visceral cues consisted of a promotional free period if the consumer responded within a valid time period, customer testimonials, and before and after images. There were also details providing that participants must pay and sign up for at least twelve months. Della Vigna and Malmendier (2006) suggests that gym memberships often work to the disadvantage of consumers, by forcing a consumer to sign up for a year or more. Often, these consumers end up paying for a membership they do not use. These findings were consistent with patterns found by Volpp, Asch, Galvin, and Loewenstein (2011).

The dependent variables for this study included attitude toward the gym membership ($\alpha = .882$) and attitude toward the ad ($\alpha = .938$), reflecting an average of the 7-point scale items put forth by Spears and Singh (2004) and Lavack et al. (2008). Once again, the two scales were averaged to create a second-order construct ($\alpha = .940$).

**Analysis of Study 3 Results**

A total of sixty-two usable responses were collected from a large Southwestern University for this initial face-to-face experiment. The sample consisted of 40.6% male ($n=26$) business students with a mean age of 21.

Before assessing the effects of the independent variables on the dependent variables, manipulation checks were run using a one-way ANOVA. For the manipulations to be successful, the contrasting condition was expected to have a higher sentence completion score than the dwelling conditions. In accord with the expectations for the manipulation, those in the contrasting condition had a greater sentence completion score ($M_{\text{contrasting}} = 2.30$) than the
dwelling condition ($M_{dwelling} = 1.76$; $F(1,60) = 5.37$; $p < 0.01$). Therefore, the manipulation of imagination thought type was successful, as was self-assigned goal implementation.

Consistent with FTR, it is anticipated that participants in the dwelling condition would have higher attitudes toward the gym membership than those participants primed with the contrasting condition. The dependent variables were coded so that a high number indicates higher attitudes. ANOVAs were used to examine differences between the two conditions, using p-values of one-tail tests.

The second-order attitude construct, with all of the covariates, including demographic information, provided a moderately significant p-value. More specifically, those in the contrasting condition had lower attitudes ($M_{contrasing} = 4.80$) than those in the dwelling condition ($M_{dwelling} = 5.14$; $F(4,57) = 2.54$; $p < 0.05$), as seen in Table 3.3 and illustrated in Figure 3.3.

Though, personal responsibility ($p < .06$) and external reasons ($p < .06$) were both significant covariates for this experiment.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>ANOVA Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude Second-Order Construct</td>
<td>Contrasting</td>
</tr>
<tr>
<td></td>
<td>Dwelling</td>
</tr>
</tbody>
</table>

Table 3.3 Summary of Study 3 Results
Summary of Study 3 Results

The results of the third experiment indicate that the manipulation of the imagination thought type was successful when asking individuals to input their own health and wellness goals, and ultimately, their attitudes were consistent with the expectations for the imagination thought type. Therefore, study 3 provides adequate support to move forward with study 6.

Study 4: Goal-Incongruent Temptation

Study Design

A 2 (visceral cues: present vs. absent) X 3 (imagination thought type: contrasting vs. dwelling vs. indulging) between-subjects design was utilized, with covariates to control for differences in demographics, cruise experience, and individual differences. These individual difference variables include: tendency to plan, personal responsibility for consequences, and
external attribution of consequences. This study addresses H1, H3, H5, and H6. The dependent variables include attitude toward the ad, attitude toward the brand, attitude toward the cruise, and purchase intentions. The dependent variables are averaged to create a single dependent variable, a second-order construct to simplify analysis of the studies.

Two advertisements were constructed to holistically reflect visceral cues either present or absent. Each ad was one page in color, based prior advertisements for cruise lines. The top of the advertisement contained the name of the fictitious cruise line “Big Cruise Company,” a headline “Western Caribbean Cruise & Tour,” and sub-headline “Spring Break 2014.” The offer on the right side of the advertisement include, “6 Days! The largest part at sea! Book today.” Images next to the offer show young adults in bathing suits dancing on the beach in the sun. Under both of the details and the image, a text provides more details with the following text:

*Experience some of the world’s most beautiful sights with a BigCruise Company cruise, for the ancient wonders of Cozumel to the exotic Belize city. Wherever your port of call, you’ll find a party onboard our modern fleet! Enjoy our special Spring Break Cruise with all you can eat food and free cocktails all cruise long! To find out why BigCruise Company is YOUR spring break cruise visit bigcruisecompany.com.*

A map next to these details shows the ports of call and departure. A yellow circle under the map provides the price for this cruise, “Cruises starting from $399 per person.” Finally, images representing cruises were selected for the bottom of the page, including a cruise ship, food, a cocktail, and beach scene.

In the visceral cue present condition, there were two visceral cues present in the ad: a promotional offer and customer testimonials. As found by Loewenstein (2005), Amos and Spears (2010), and Amos and Grau (2011), using these types of visceral cues helps spur an emotion reaction through the visceral cues by instructing viewers to imagine themselves
obtaining the reward of the cruise while viewing the visceral stimuli. The following phrase was also included in the yellow circle beneath the price to represent a promotional offer, “Book by February 29th and get an extra 10% off.” The second visceral cue for the ad with visceral cues present were customer testimonials, in a black outlined box to the left of the yellow circle. The first, by a fictitious customer Amy, says “Best time of my life! From the food to the bottomless umbrella drinks...totally memorable experience.” The second, by a Twitter handle @MarkDawes, says “My last spring break before graduation was awesome! #YOLO.” The YOLO hashtag is a young phrase, meaning you only live once. This same advertisement was used for Study 1. The advertisement designed with visceral cues absent is missing both the customer testimonials and the promotional offer. Both versions of the advertisement are included in Appendix A.

**Sample and Procedure**

Study 4 was conducted on 184 undergraduate students at a major Southwestern University. Subjects were assigned to experimental conditions where they each viewed one of the manipulated advertisements and responded to the attached questionnaire. About 41% of the participants were male and 59% female. Forty-two percent of the subjects were between the ages of 18 and 21 and forty-seven percent of the subjects were between 22 and 25. All other participants were under 33. Most of the participants were either juniors (35%) or seniors (61%). Approximately 58% of the subjects were Caucasian, 13.6% were African American, 11% were Hispanic, 7.1% were Asian, 3.9% were multi-racial, and 4.5% self-reported as “other.”
Each subject was informed that they were participating in two separate studies: a research study examining how daydreaming affected goals, as suggested by Oettingen (2012), and a study looking at a preproduction version of an advertisement. The subjects were also verbally instructed to read the consent form and instructions. Each participant received a booklet that contained a consent form, instructions, and a questionnaire. Only after completing the packet were they given a second packet containing the advertising study. All subjects were told to turn in both together to ensure they received course credit for completing both.

Following the consent form, each participant read the imagination priming instructions, which provided a description of a goal:

*Having an emergency fund is extremely important, especially for students about the graduate and start their first job. An emergency fund can help take care of medical bills, moving expenses, unemployment periods, and the unplanned emergencies in life. Studies indicate that students should have at least $700 in an emergency fund by the time they graduate from college.*

Participants then read instructions for either the contrasting, dwelling, or indulging condition (Oettingen 2012). Priming instructions were modified to reflect the savings goal given, as done in Study 1. Thus, respondents were exposed randomly to one of three scenarios that activated an indulging, dwelling, or contrasting imagination thought type.

**Indulging Condition Instructions**

In the indulging condition, participants were first instructed to “List 4 positive aspects/futures you imagine would occur because you saved this $700” and then to “Rank the 4 positive aspects that you imagine would occur from saving $700 over the next year, by order of
importance (how significant will each be?) 1= most exciting aspect of the future, 4= least exciting aspect of that future.”

Following these instructions, participants in the indulging condition were told to “Copy your #2 ranked positive aspect/future here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked positive aspect/future here” and then were asked to indulge in their fantasies with the same script as their second ranked future.

Dwelling Condition Instructions

In the dwelling condition, participants were first instructed to “List 4 negative aspects that may prevent you from saving $700 over the year” and then to “Rank the 4 negative aspects that may prevent you from saving $700 over the year, by order of importance (how significant of a temptation will each be?) 1= most tempting, 4= tempting.”

Following these instructions, participants in the dwelling condition were told to “Copy your #2 ranked negative aspect/temptation here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked negative aspect/ temptation
here” and then were asked to indulge in their thoughts with the same script as their second ranked temptation.

**Contrasting Condition**

In the contrasting condition, participants were first instructed to “List 4 positive aspects/futures you imagine would occur because you saved this $700” and then to “List 4 negative aspects that may prevent you from saving $700 over the year.” Afterward, participants were given instructions to “Rank the 4 positive aspects that you imagine would occur from saving $700 over the next year, by order of importance (how significant will each be?) 1= most exciting aspect of the future, 4= least exciting aspect of that future” and “Rank the 4 negative aspects that may prevent you from saving $700 over the year, by order of importance (how significant of a temptation will each be?) 1= most tempting, 4= tempting.”

Next, participants in the contrasting condition were told to “Copy your #1 ranked positive aspect/future here.” Next, the instructions read, “Imagine this aspect. Now, depict the respective events or experiences in your imagination as intensively as possible! Let the mental images pass by in your thoughts and do not hesitate to give your fantasies free reign. Take as much time and space as you need to describe the scenario.” Afterward, participants were instructed to “Copy your #1 ranked negative aspect/ temptation here” and then were asked to indulge in their thoughts similarly as with the positive aspect, describe in the previous sentences.
Manipulation Check Questions

Following the manipulated imagination thought conditions participants were given a sentence completion task as part of the manipulation check, as done with study 1. They were advised, “Please carefully read all sentence stems below. Then, complete the four sentence stems- and only those four that match best how you think about saving $700 over the next year. Pick only 4 and complete the sentences. Pick the 4 that stand out most to you,” as described in Study 1.

As a manipulation check, the number of sentence stems participants completed leading to the formulation of plans were summed, and ranged from 0 (no plan formulation sentences completed) to 4 (all four plan formulation sentences completed), as done by Oettingen (2012). Next, participants responded to “To what extent does saving $700 depend on external circumstances and “To what extent does saving $700 depend on personal responsibility?,” ranging from 1 (not at all) to 7 (totally). Furthermore, participants responded to items assessing their tendency to plan or not, using a 7 point Likert scale. These two items are: “I constantly plan for the future” and “I prefer to make up my own future as I go.”

Dependent Variables

Participants were then instructed to look at the second packet with the advertisement as if they saw it in their inbox. Subsequently, they were instructed to flip the advertisement over when completing the questionnaire and to take their time looking at the ad, considering the ad as long as they normally would when checking their inbox. Furthermore, they were reminded that there were no correct or incorrect responses to the ad.
Participants were randomly assigned to view either the advertisement with the visceral cues present or the advertisement with the visceral cues absent. The advertisement was for a fictional spring break cruise from BigCruise Company (see Appendix A). The dependent variables were adopted from prior studies, including attitude toward the cruise ($\alpha = .931$) attitude toward the ad ($\alpha = .903$), attitude toward the brand ($\alpha = .840$), and purchase intentions ($\alpha = .967$), reflecting an average of the 7-point scale items put forth by Spears and Singh (2004) and Lavacak et al. (2008). See Appendix B for the scale items and Appendix C for the factor analysis. Because attitude toward the brand loaded into two constructs, two items were removed so that the scale loaded on a single construct. Two covariates were also included to account for cruise history and each individual’s preference for taking cruises, using a 7-point Likert scale. Scales were written so that a high number indicates a positive attitude and intention, and then averaged to form a second-order construct “attitudes” ($\alpha = .878$) to simplify analysis.

**Manipulation Checks**

Before assessing the effects of the independent variables on the dependent variables, manipulation checks were run using a one-way ANOVA. For the manipulations to be successful, the contrasting condition was expected to have a higher sentence completion score than the indulging or dwelling conditions. The indulging and dwelling conditions were collapsed for the manipulation checks and to use a one-tailed p-value test. In accord with the expectations for the manipulation, those in the contrasting condition had a greater sentence completion score.
(M_{contrasting} = 2.43) than the other conditions (M_{other} = 1.92; F(1,152) = 2.02; p < 0.07). Therefore, the manipulation of imagination thought type was successful.

To assess presence or absence of visceral cues in the advertisements, participants were asked about the cruise ad they saw and whether the ad had “a promotional offer,” “limited time to participate,” and “customer testimonials.” Participants responded using a 7-point Likert type scale where 7 is “agree” and 1 is “disagree.” To check the manipulation success, a one-way ANOVA was run with the visceral cue manipulation as the independent variable and the mean of the three items (α = .743) as the dependent variable. As expected, the ad with visceral cues scored higher on visceral cue presence (M_{visceral} = 5.89) compared to the ad with visceral cues absent (M_{absent} = 3.32; F(1,150) = 150.88, p < 0.001). Thus, the manipulation of visceral cue presence in advertisements was successful.

**Results of Study 4: Testing H1, H3, H5, H6**

To test H1, H3, H5, and H6, the following steps were implemented. First, a 2 (Visceral Cues: Present vs. Absent) x 3 (Imagination Thought Type: Contrasting vs. Indulging vs. Dwelling) ANCOVA was run on the key dependent variable, “attitudes.” All reported p-values are for one-tail tests. The results of the univariate test are provided below in Table 3.4.
Table 3.4 Visceral Cues*Imagination Thought Type Effect on Attitudes

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</tbody>
</table>

For visceral cue presence, there was a significant main effect, consistent with TVI, in that the presence of visceral cues in advertisements significantly increased attitudes ($M_{visceral} = 4.76$) compared to when visceral cues are absent ($M_{absent} = 4.37$; $F(12,135)=5.42$; $p<0.01$). There was not a significant main effect for imagination thought type, as depicted by FRT. Thus, imagination thought types did not have a direct influence on attitudes ($M_{contrasting} = 4.48$ vs. $M_{dwelling} = 4.52$ vs. $M_{indulging} = 4.67$; $F(12,135)=0.47$; $p>.62$). Analysis supported a significant two-way interaction between visceral cue presence and imagination thought type for advertising temptations incongruent with personal goals of saving money ($F(12,135)=2.99$; $p<0.05$). Only age ($p<.09$) was a significant covariate. The following analysis pieces apart the two-way interaction and discusses the hypotheses, following Table 3.5, summarizing the analysis and hypotheses, and Figure 3.4, illustrating the interaction’ effects on attitudes.
Table 3.5 Imagination Thought Type*Visceral Cues Effect on Attitudes

<table>
<thead>
<tr>
<th>Imagination Thought Type</th>
<th>Manipulation</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>η²</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cues Present</td>
<td>73</td>
<td>4.76</td>
<td>1.02</td>
<td>5.42</td>
<td>.01</td>
<td>.637</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cues Absent</td>
<td>75</td>
<td>4.37</td>
<td>1.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indulging</td>
<td>Cues Present</td>
<td>27</td>
<td>5.01</td>
<td>1.01</td>
<td>4.31</td>
<td>.02</td>
<td>.530</td>
<td>H1 Supported</td>
</tr>
<tr>
<td></td>
<td>Cues Absent</td>
<td>30</td>
<td>4.35</td>
<td>1.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dwelling</td>
<td>Cues Present</td>
<td>22</td>
<td>4.76</td>
<td>0.90</td>
<td>7.49</td>
<td>.005</td>
<td>.756</td>
<td>H3 Supported</td>
</tr>
<tr>
<td></td>
<td>Cues Absent</td>
<td>19</td>
<td>4.23</td>
<td>1.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrasting</td>
<td>Cues Present</td>
<td>24</td>
<td>4.47</td>
<td>1.09</td>
<td>0.01</td>
<td>.45</td>
<td>.052</td>
<td>H5 Supported</td>
</tr>
<tr>
<td></td>
<td>Cues Absent</td>
<td>26</td>
<td>4.50</td>
<td>1.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.4 Results of Study 4 on Attitude Dependent Variable

![Figure 3.4](image)

Hypothesis 1

*Hypothesis 1* A goal-incongruent ad with (vs. without) visceral cues will have higher (lower) $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{brand}}$, and $\text{PI}$ when individuals have indulging thoughts.
Consistent with FTR, it is anticipated that participants in the indulging condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the indulging condition. To analyze the hypothesis, p-values of one-tail tests were used to support or reject the hypothesis. Based on the ANCOVA, those in the indulging condition had higher attitudes when the advertisement had visceral cues present ($M_{\text{visceral}} = 5.01$) versus when visceral cues were absent ($M_{\text{absent}} = 4.35$; $F(8,48) = 4.31; p < .02$), with age, only, as a significant covariate ($p < .05$). Given the significance of the ANCOVA and the direction of the means, the results provide support for hypothesis 1.

**Hypothesis 3**

**Hypothesis 3:** A goal-incongruent ad with (vs. without) visceral cues will have higher $Att_{\text{Ad}}$, $Att_{\text{Product}}$, $Att_{\text{brand}}$, and PI when individuals have dwelling thoughts.

Consistent with FTR, it is anticipated that participants in the dwelling condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the dwelling condition. To analyze the hypothesis, p-values of one-tail tests were used to support or reject the hypothesis. Based on the ANCOVA, those in the dwelling condition had higher attitudes when the advertisement had visceral cues present ($M_{\text{visceral}} = 4.76$) versus when visceral cues were absent ($M_{\text{absent}} = 4.23$; $F(8,32) = 7.49; p < .005$), with age ($p < .09$), academic status ($p < .02$), and external attribution for success ($p < .04$) as significant covariates. Given the significance of the ANCOVA and the direction of the means, the results provide support for hypothesis 3.
Hypothesis 5

**Hypothesis 5:** A goal-incongruent ad with (vs. without) visceral cues will not differ on $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{brand}}$, and PI when individuals have contrasting thoughts.

Consistent with FTR, it is anticipated that participants in the contrasting condition would not differ on attitudes for the ad with visceral cues present or the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the contrasting condition. To analyze the hypothesis, p-values of one-tail tests were used to support or reject the hypothesis. Based on the ANCOVA, those in the contrasting condition had significantly similar attitudes when the advertisement had visceral cues present ($M_{\text{visceral}} = 4.47$) versus when visceral cues were absent ($M_{\text{absent}} = 4.50$; $F(8,41) = 0.01; p < .045$), with personal responsibility for success ($p < .02$) as significant covariate. Given the non-significance of the ANCOVA, the results provide support for hypothesis 5.

Hypothesis 6

**Hypothesis 6:** Individuals with dwelling thoughts (and indulging thoughts) have higher $\text{Att}_{\text{Ad}}$, $\text{Att}_{\text{Product}}$, $\text{Att}_{\text{brand}}$, and PI when goal-incongruent ads have visceral cues than individuals with contrasting thoughts.

Consistent with FTR, it is anticipated that participants in the contrasting condition would have lower attitudes for the ad with visceral cues present compared to those participants in the indulging or dwelling conditions. ANCOVAs were used to examine differences among the imagination thought type conditions, isolating those participants who viewed the manipulation with the visceral cues present. To analyze the hypothesis, p-values of one-tail tests were used to support or reject the hypothesis. Based on the ANCOVAs, those in the dwelling condition ($M_{\text{dwelling}} = 4.76$) had higher attitudes toward the advertisement with visceral cues present than those in the contrasting condition ($M_{\text{contrasting}} = 4.47; F(8,37) = 2.02; p < .08$). Furthermore, those
in the indulging condition (M_{indulging}=5.01) had higher attitudes than those in the contrasting condition (M_{contrasting}=4.47; F(8,42)=2.89; p<.04). Since the indulging and dwelling conditions were similar with visceral cues present, both were combined into a single category to compare with the contrasting condition. Another ANCOVA was run to compare those in the contrasting condition (M_{contrasting}=4.47) with the other category (M_{other}=4.90), revealing that those in the contrasting condition had significantly lower attitudes than the other conditions (F(8,64)=3.38; p<.03). None of the covariates were significant. Given the significance of the ANCOVAs and the direction of the means, the results provide support for hypothesis 6, summarized in Table 3.6.

<table>
<thead>
<tr>
<th>Imagination Thought Type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>η²</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrasting</td>
<td>24</td>
<td>4.47</td>
<td>1.09</td>
<td>2.02</td>
<td>.08</td>
<td>.283</td>
<td>H6 Supported</td>
</tr>
<tr>
<td>Dwelling</td>
<td>22</td>
<td>4.76</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrasting</td>
<td>24</td>
<td>4.47</td>
<td>1.09</td>
<td>2.89</td>
<td>.04</td>
<td>.383</td>
<td></td>
</tr>
<tr>
<td>Indulging</td>
<td>27</td>
<td>5.01</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrasting</td>
<td>24</td>
<td>4.47</td>
<td>1.09</td>
<td>3.38</td>
<td>.03</td>
<td>.440</td>
<td></td>
</tr>
<tr>
<td>Dwelling &amp; Indulging</td>
<td>49</td>
<td>4.90</td>
<td>0.96</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary of Study 4 Results

In summary, support was found for H1, H3, H5, and H6. Thus, imagination thought type moderates the main effect of visceral cue presence in advertisements. The presence of visceral cues (versus the absence of visceral cues) increases attitudes for the indulging and dwelling conditions only. This main effect holds true for only the indulging and dwelling imagination thought types. However, those in the contrasting condition experienced an increase in
willpower so that they did not have the same increase in attitudes when they view the advertisement with visceral cues present.

**Study 5: Goal-Congruent Temptation**

**Study Design**

A 2 (visceral cues: present vs. absent) X 3 (imagination thought type: contrasting vs. dwelling vs. indulging) between-subjects design was utilized, with covariates to control for differences in demographics and individual differences. The same individual difference variables were included as in Study 4. Though, additional covariates were added and considered for Study 4. The purpose of Study 5 is two-fold: identify how imagination regulates the impact of goal-congruent visceral cues and identify the underlying influence of self-efficacy. This study addresses H2, H4, H7, H8, and H9. In this case, the goal-congruent temptation consists of a third-party financial savings assistance program, free for the first two months and $2 a month subsequently, requiring a 12-month commitment. The dependent variables include attitude toward the ad, attitude toward the brand, attitude toward the savings program, and purchase intentions.

Two advertisements were constructed to holistically reflect visceral cues either present or absent. Each ad was one page in color, based on prior advertisements for savings programs. For this study examining temptations congruent with the personal goal of savings money, an advertisement for a savings program was employed. Loewenstein (1996) contends that visceral cues can often be used to get consumers committed to a program in which they spend their money, but lack any long-term value.
The top of the advertisement contains the headline “Learn to Save ‘YOUR WAY’.”

Underneath this headline, three bullet points elaborate on what the savings program can help with:

- Learn how to save money and budget
- Create an emergency fund
- Keep more of your money

The ad with visceral cues present provides two types of visceral influences: a free period upon enrollment by a certain date and customer testimonials. The enrollment promotion says, “Enroll by August 19th to take advantage of our FREE* savings program.” The customer testimonials say the following.

Kevin- “I couldn’t have imagined saving all that money on my own.”
Jenna- “I now have an emergency fund. I’ve never imagined ME as having savings before.”

A yellow triangle next to these bullet points provides a date to enroll by, “Enroll by August 19th,” and a picture of a piggy bank with money all around resides to the left of the yellow triangle. Beneath the yellow triangle and bullet points there is a large image of a woman looking into space, pensively. To the left of the woman are the customer testimonials and the promotional free term. Just beneath the promotion, the savings program says, “Partners with Wells Fargo, American Bank, and YOUR bank.” Near the bottom of the page, the advertisement lists the key features of the savings program: debt consolidation, student loan advice, complimentary savings counseling, bill analysis, and a customized savings plan. The very bottom of the ad provides a disclaimer in small font on the left, followed by the brand logo of the fictitious First Savings, and a button for enrollment. The disclaimer says, “*Free for first 2 months. After initial month, the savings program is as low as ONLY $2 per month.” The
advertisement designed with visceral cues absent is missing both the customer testimonials and the promotional offer period. Both versions of the advertisement are included in Appendix A.

Sample and Procedure

Study 2 obtained 162 usable responses, collected via MTurk. Subjects were assigned to experimental conditions where they each viewed one of the manipulated advertisements, randomly assigned to one imagination thought type condition, and responded to the questionnaire. About 44% of the participants were male and 56% female. The average age of participants is 37, ranging from 19 to 82 (standard deviation= 13.02). Most of the participants had some college education (30%), graduated college (39.5%), or earned a graduate degree (21%). Approximately 74.7% of the subjects were Caucasian, 8% were African American, 4.3% were Hispanic, and 12.3% were Asian.

Each subject was informed that they were participating in a study examining how daydreaming affected savings goals, as suggested by Oettingen (2012). Since the study was delivered via Qualtrics, the subjects were advised to print out the consent form and read the instructions carefully. Each participant received $0.45 in exchange for their participation, a typical MTurk payment. Each participant was paid after inputting a unique, randomized nine digit number provided upon completion of the survey. Following the consent form, each participant read the imagination priming instructions, which provided a description of a goal:

*Having an emergency fund is extremely important, especially since the economy has been particularly unpredictable. An emergency fund can help take care of medical bills, moving expenses, unemployment periods, and the unplanned emergencies in life.*
Studies indicate that the average person should have at least 2 to 3 months of his/her salary in an emergency fund. Imagine that you have set a goal to save $700 by the end of this year.

Participants then read instructions for either the contrasting, dwelling, or indulging condition (Oettingen 2012). Priming instructions replicated those of Study 4. Thus, respondents were exposed randomly to one of three scenarios that activated an indulging, dwelling, or contrasting imagination thought type.

**Manipulation Check Questions**

Following the manipulated imagination thought conditions participants were given a sentence completion task, mirroring Study 1. The number of plan formulation sentence stems were added, and ranged from 0 (no plan formulation sentences completed) to 4 (all four plan formulation sentences completed), as done by Oettingen (2012). Again, participants responded to the extent to which they attribute goal success to external circumstances and personal responsibility, and individual variables, such as tendency for planning, deal proneness, current perceptions of existing savings health, and preference for visceral cues in advertising.

**Dependent Variables**

Participants were then shown a screen with instructing for viewing the advertisements:

*Now, please look at the ad on the following page. Take a few minutes to examine it as if you received the ad in your email inbox. When you finish, continue with the survey. You will be asked questions about this ad.*

Participants were randomly assigned to see either the advertisement with the visceral cues present or the advertisement with the visceral cues absent. The advertisement was for a
fictional savings plan service from First Savings (see Appendix A). The dependent variables remained the same from Study 4. All of attitude toward the savings service ($\alpha = .965$) attitude toward the ad ($\alpha = .950$), attitude toward the brand ($\alpha = .916$), and purchase intentions ($\alpha = .985$), reflecting an average of the 7-point scale items put forth by Spears and Singh (2004) and Lavacak et al. (2008). For this study, the deal proneness was added as a covariate ($\alpha = .873$), and participants responded to Schwarzer and Jerusalem’s (1995) self-efficacy ten-item scale ($\alpha = .930$) after the individual difference variables. See Appendix B for the scale items. Scales, written so that a high number indicates a positive attitude, were averaged to form a second-order construct “attitudes” ($\alpha = .923$) to simplify analysis. Factor analysis indicated that each scale loaded on itself successfully and these loadings are provided in Appendix C.

**Manipulation Checks**

Before assessing the effects of the independent variables on the dependent variables, manipulation checks were run using a one-way ANOVA. Once again, for successful manipulations, the contrasting condition should have a higher sentence completion score than the indulging or dwelling conditions. The indulging and dwelling conditions were collapsed. As expected, those in the contrasting condition had a greater sentence completion score ($M_{\text{contrasting}} = 2.34$) than the other conditions ($M_{\text{other}} = 2.08$; $F(1,160) = 2.88; p < 0.04$). Therefore, the manipulation of imagination thought type was successful.

To assess presence or absence of visceral cues in the advertisements, participants were asked about the savings plan ad they saw and whether the ad had “a promotional offer,” “limited time to participate,” and “customer testimonials.” Participants responded using a 7-
point Likert type scale. A one-way ANOVA was run with the visceral cue manipulation as the independent variable and the mean of the three items (α = .601) as the dependent variable. As expected, the ad with visceral cues scored higher on visceral cue presence (M_{visceral} = 5.30) compared to the ad with visceral cues absent (M_{absent} = 4.58; F(1,160) = 17.23, p< .001). Thus, the manipulation of visceral cue presence in advertisements was successful.

Results of Study 5: Testing H2, H4, H7, H8, H9

To test H2, H4, H7, H8, and H9, the following steps were implemented. First, a 2 (Visceral Cues: Present vs. Absent) x 3 (Imagination Thought Type: Contrasting vs. Indulging vs. Dwelling). An ANCOVA was run on the key dependent variable, attitudes. The results of the interaction are provided below in Table 3.7.

Table 3.7 Visceral Cues*Imagination Thought Type Effect on Attitudes

<table>
<thead>
<tr>
<th>Univariate Test</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visceral Cues</td>
<td>2.12</td>
<td>.07</td>
<td>.304</td>
</tr>
<tr>
<td>Imagination Thought Type</td>
<td>0.39</td>
<td>.33</td>
<td>.112</td>
</tr>
<tr>
<td>Visceral Cue Presence*Imagination Thought Type</td>
<td>3.14</td>
<td>.04</td>
<td>.595</td>
</tr>
</tbody>
</table>

The significant covariates include preference for visceral cues (p < .001), age (p< .004), education level (p< .05), and deal proneness (p< .01). Also, in ruling out alternative explanations, day until the offer expires was initially run as a covariate but was insignificant.
Qualtrics provides a time and date for all participants, which enabled calculation of days until the promotion expired. In further analysis, time until expiration was removed due to its non-significance. As in Study 4, all reported p-values are for one-tail tests. For visceral cue presence, there was a significant main effect, consistent with TVI, in that the presence of visceral cues in advertisements significantly increased attitudes (M<sub>visceral</sub> = 4.63) compared to when visceral cues are absent (M<sub>absent</sub> = 4.08; F(15,144) = 3.14; p < 0.04). There was not a significant main effect for imagination thought type, as depicted by FRT. Thus, imagination thought types did not have a direct influence on attitudes (M<sub>contrasting</sub> = 4.32 vs. M<sub>dwelling</sub> = 4.45 vs. M<sub>indulging</sub> = 4.29; F(15,144) = 0.39; p > 0.33). Analysis supported a significant two-way interaction between visceral cue presence and imagination thought type for advertising temptations congruent with personal goals of saving money (F(15,144) = 3.14; p < 0.04). The following analysis pieces apart the two-way interaction and discusses the hypotheses, following Table 3.8, summarizing the analysis and hypotheses, and Figure 3.5, illustrating the interaction’ effects on attitudes.

**Table 3.8 Imagination Thought Type*Visceral Cues Effect on Attitudes**

<table>
<thead>
<tr>
<th>Imagination Thought Type</th>
<th>Manipulation</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>η&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cues Present</td>
<td>78</td>
<td>4.63</td>
<td>1.40</td>
<td>1.42</td>
<td>2.12</td>
<td>.07</td>
<td>.304</td>
<td></td>
</tr>
<tr>
<td>Cues Absent</td>
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<td>4.08</td>
<td>1.44</td>
<td>1.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indulging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cues Present</td>
<td>24</td>
<td>4.93</td>
<td>1.22</td>
<td>6.42</td>
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<td>.697</td>
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<td>Cues Absent</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cues Present</td>
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<td>1.12</td>
<td>3.98</td>
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<td>.494</td>
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<td>4.04</td>
<td>1.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrasting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cues Present</td>
<td>30</td>
<td>4.20</td>
<td>1.63</td>
<td>0.14</td>
<td>.35</td>
<td>.140</td>
<td>H7 Supported</td>
<td></td>
</tr>
<tr>
<td>Cues Absent</td>
<td>29</td>
<td>4.44</td>
<td>1.43</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Hypothesis 2

Hypothesis 2: A goal-congruent ad with (vs. without) visceral cues will have higher (lower) $Att_{Ad}$, $Att_{Product}$, $Att_{brand}$, and $PI$ when individuals have indulging thoughts.

Consistent with FTR, it is anticipated that participants in the indulging condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the indulging condition. To analyze the hypothesis, $p$-values of one-tail tests using planned contrasts were used to support or reject the hypothesis. Deal proneness ($p<0.01$) was the only significant covariate. Within the indulging condition, attitudes were higher when visceral cues were present ($M_{visceral}=4.94$) versus when they were absent ($M_{absent}=3.76$; $F(10,42)=6.42$, $p<0.005$). Consistent with the hypothesis, those in the indulging condition were unprepared to deal with more visceral temptations and saw the advertisement as an alternative way to achieve their goals. Given the significance of the ANCOVA and the direction of the means, the results provide support for hypothesis 2.
Hypothesis 4

**Hypothesis 4:** A goal-congruent ad with (vs. without) visceral cues will have higher \( \text{Att}_\text{Ad} \), \( \text{Att}_\text{Product} \), \( \text{Att}_\text{brand} \), and \( \text{PI} \) when individuals have dwelling thoughts.

Consistent with FTR, it is anticipated that participants in the dwelling condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the dwelling condition. To analyze the hypothesis, p-values of one-tail tests using planned contrasts were used to support or reject the hypothesis. Only tendency to make plans (\( p < .09 \)) affected the relationship between dwelling thoughts on attitudes for different visceral cue advertising conditions. Within the dwelling condition, attitudes were higher when visceral cues were present (\( M_{\text{visceral}} = 4.87 \)) versus when they were absent (\( M_{\text{absent}} = 4.04; F(10,37) = 3.98, p < 0.02 \)). Consistent with the hypothesis, those in the dwelling condition were unprepared to deal with more visceral temptations and saw the advertisement as an alternative way to achieve their goals. Given the significance of the ANCOVA and the direction of the means, the results provide support for hypothesis 4.

Hypothesis 7

**Hypothesis 7:** A goal-congruent ad with (vs. without) visceral cues will not differ on \( \text{Att}_\text{Ad} \), \( \text{Att}_\text{Product} \), \( \text{Att}_\text{brand} \), and \( \text{PI} \) when individuals have contrasting thoughts.

Consistent with FTR, it is anticipated that participants in the contrasting condition would not differ on attitudes for the ad with visceral cues present or the ad with visceral cues absent. An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the contrasting condition. To analyze the hypothesis, p-values of one-tail tests using planned contrasts were used to support or reject the hypothesis. Both deal proneness (\( p < 0.01 \)), and ethnicity (\( p < 0.02 \)) were significant covariates. Within the contrasting condition,
attitudes were statistically similar when visceral cues were present ($M_{visceral}=4.20$) versus when they were absent ($M_{absent}=4.44$; $F(10,48)=0.14$, $p>0.35$). Consistent with the hypothesis, those in the contrasting condition were prepared to deal with more visceral temptations and did not see the advertisement as an alternative way to achieve their goals, but as a distraction. Given the non-significance of the ANCOVA, the results provide support for hypothesis 7.

**Hypothesis 8**

**Hypothesis 8:** Individuals with dwelling thoughts (and indulging thoughts) have higher $Att_{Ad}$, $Att_{Product}$, $Att_{brand}$, and PI when goal-congruent ads have visceral cues than individuals with contrasting thoughts.

Consistent with FTR, it is anticipated that participants in the contrasting condition would have lower attitudes for the ad with visceral cues present compared to those participants in the indulging or dwelling conditions. An ANCOVA was used to examine differences among the imagination thought type conditions, isolating those participants who viewed the manipulation with the visceral cues present. To analyze the hypothesis, $p$-values of one-tail tests using planned contrasts were used to support or reject the hypothesis. Based on the ANCOVAs, those in the dwelling condition ($M_{dwelling}=4.87$) had higher attitudes toward the advertisement with visceral cues present than those in the contrasting condition ($M_{contrast}=4.20$; $F(10,42)=1.89$; $p<.08$). None of the covariates were significant. Furthermore, those in the indulging condition ($M_{indulging}=4.93$) had higher attitudes than those in the contrasting condition ($M_{contrast}=4.30$; $F(10,42)=3.73$; $p<.03$). Within this ANCOVA, education ($p<.06$) and deal proneness ($p<.06$) were significant covariates. Since the indulging and dwelling conditions were similar with visceral cues present, both were combined into a single category to compare with the contrasting condition. Another ANCOVA was run to compare those in the contrasting condition ($M_{contrast}=4.30$) with the other category ($M_{other}=4.90$), revealing that those in the contrasting
condition had significantly lower attitudes than the other conditions (F(10,66)= 4.49; p< .01). The significant covariates include education (p< .04), and deal proneness (p< .008).

Consistent with the hypothesis, those in the contrasting condition had lower attitudes toward the ad with visceral cues present than those participants in the dwelling and indulging conditions. In other words, those in the indulging and dwelling conditions saw the temptation as an alternative way to achieve their goals, while those in the contrasting condition did not. Given the significance of the ANCOVAs and the direction of the means, the results provide support for hypothesis 8, summarized in Table 3.9.

<table>
<thead>
<tr>
<th>Imagination Thought Type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>η²</th>
<th>Hypotheses</th>
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</thead>
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<tr>
<td>Contrasting</td>
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<td>1.59</td>
<td>1.89</td>
<td>.08</td>
<td>.043</td>
<td>H8 Supported</td>
</tr>
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<td>Dwelling</td>
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<td>4.87</td>
<td>1.16</td>
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<tr>
<td>Contrasting</td>
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<td>.03</td>
<td>.082</td>
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<tr>
<td>Indulging</td>
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<td>1.22</td>
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<tr>
<td>Contrasting</td>
<td>29</td>
<td>4.11</td>
<td>1.59</td>
<td>4.49</td>
<td>.01</td>
<td>.551</td>
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<tr>
<td>Dwelling &amp; Indulging</td>
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<td>4.90</td>
<td>1.39</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Hypothesis 9**

_H9_: Self-Efficacy mediates the relationship between the interaction of thought condition and Visceral Cues on Att_Ad, Att_Product, Att_Brand, and PI.

Consistent with FTR, it is anticipated that self-efficacy is the underlying mechanism to explain the effect of the interaction of visceral cues and imagination thought type on attitudes. Within SPSS, PROCESS was used to examine the role of self-efficacy in a meditational relationship. To analyze the hypothesis, a 95% bias corrected confidence interval with 5000 bootstraps was applied to examine the confidence interval. If the confidence interval does not
contain zero, then a mediating relationship does not exist (Preacher, Rucker, and Hayes 2007; Hayes 2009).

Since imagination thought type moderates the relationship between visceral cue presence and attitudes, visceral cue presence was selected in Model 8 as the independent variable, and attitudes as the dependent variable. Given the limitations of PROCESS, the analysis required the creation of two dummy variables to input imagination thought type as a moderator, with self-efficacy as the mediator. Thus, imagination thought type was transformed into two dummy variables, and PROCESS was run twice, each time with each dummy variable as the moderator in SPSS with the Hayes (2012; see http://www.afhayes.com/spss-sas-and-mplus-macros-and-code.html). The other dummy variable was included as a covariate in each analysis set. The first dummy variable represented the dwelling condition, with codes of 1 (dwelling condition) and 0 (all other conditions). The second dummy variable represented the contrasting condition, with codes of 1 (contrasting condition) and 0 (all other conditions).

For the dwelling condition versus “other” conditions, the mean indirect effect from the bootstrap analysis is significant ($a \times b = .2652$), with a 95% confidence interval excluding zero (.0208 to .6855). In the indirect path, visceral cue presence increases attitudes toward a temptation. Holding constant self-efficacy, the direct effect of visceral cue presence on attitudes is not significant ($c = .5272$, $p = .093$), although the total effect of visceral cue presence on attitudes is significant ($c' = .8780$, $p < .04$). According to Baron and Kenny (1986), self-efficacy fully mediates the interaction of dwelling thought type and visceral influences on attitudes.
For the imagination dummy variable, versus “other” conditions, the mean indirect effect from the bootstrap analysis is significant (a x b = .1049), with a 95% confidence interval excluding zero (-.4422 to -.0027). For the contrasting condition, the conditional effects of visceral cues on attitudes are insignificant effects on the moderator. However, there are significant effects on the moderator for the “other” conditions (p = .000). Holding constant self-efficacy, the direct effect of visceral cue presence on attitudes is significant (c = .2805, p = .017), while the total effect of visceral cue presence on attitudes is not significant (c’ = -.1438, p< .70).

According to Baron and Kenny (1986), self-efficacy does not fully mediate the relationship the interaction of dwelling thought type and visceral influences on attitudes. Yet, the evidence supports moderated mediation, in that self-efficacy explains the effects from dwelling and indulging thought types, but not those in the contrasting condition (c = .1049), with a 95% confidence interval excluding zero (-.4422 to -.0027).

Summary of Study 5 Results

In summary, support was found for H2, H4, H7, H8, and H9. Thus, imagination thought type moderates the main effect of visceral cue presence in advertisements when advertisements feature temptations that are consistent with personal goals. The presence of visceral cues (versus the absence of visceral cues) increases attitudes. This main effect holds true for both the indulging and dwelling imagination thought type conditions. However, those in the contrasting condition experienced focused willpower so that they did not have the same increase in attitudes when they view the ad with an alternative route for achieving their savings goals.
Study 6: Self-Efficacy Manipulated

Study Design

The general theoretical framework supports that contrasting thought types prepare individuals to experience temptations and overcome those temptations. Theorizing proposes that it is the dual positive and negative realities produced from the contrasting thought type so that when a temptation is present, an individual experiences heightened self-efficacy. This, then, results in lowered attitudes toward the temptation. To provide stronger evidence for this process, study 6 manipulates self-efficacy. Prior research has adopted similar procedures to offer support for analogous theorizing (Monga and John 2007; Yang, Zhang, and Peracchio 2010; Zhao, Hoeffler, and Zauberman 2007).

A 2 (visceral cues: present vs. absent) X 3 (imagination thought type: contrasting vs. dwelling vs. indulging) X 2 (self efficacy: high vs. low) between-subjects design was utilized, with covariates to control for differences in demographics and individual differences. The same individual difference variables were included as in Study 5. To be clear, when a participant receives a self-efficacy manipulation redundant and analogous to his/her thought type manipulation (e.g. high self-efficacy with indulging thought type or low self-efficacy with dwelling thought type), theory suggests that the results and interaction patterns from Study 4 and Study 5 will be replicated. On the other hand, when a participant receives a self-efficacy manipulation different from his/her thought type manipulation (e.g. low self-efficacy with indulging thought type or high self-efficacy with dwelling thought type), theory indicates that the resulting attitudes toward a temptation will behave much like the contrasting condition. In
other words, attitudes toward a temptation will not increase when visceral cues are present in the tempting ad.

In this case, the goal-congruent temptation consists of an advertisement for a gym membership, free for the first couple of months and, requiring a 12-month commitment. The dependent variables include attitude toward the ad, attitude toward the brand, attitude toward the savings program, and purchase intentions, averaged into a second-order construct attitudes.

Two advertisements were constructed to holistically reflect visceral cues either present or absent. Each ad was one page in color, based on prior advertisements for gym memberships. After completing the sentence completion task, participants were instructed to take a health inventory assessment (Thomas, Reading, and Shephard 1992), which provided them with results. The measure assessed the participants’ self-beliefs in their ability to job and run over incremental blocks of time at moderate to difficult intensity levels without stopping. The scale included six items, with each item on the scale representing 10, 20, 30, 40, 50, and 60 minutes. Participants rated how confident they were in their ability to run for each increment and jog for each increment, following McAuley, Talbot, and Martinez (1999), on a 100-point sliding scale from 100% (complete confidence) to 0% (no confidence at all).

Upon completion of the health inventory assessment, participants were given false feedback relative to their performance. Each individual was randomly assigned to either the high efficacy or low efficacy condition, as done by Morales, Jerome, McAuley, Snook, and Canaklisova (2002). Those in the high efficacy condition were given the following script:

*Congratulations. Relative to norms constructed for those of similar age, gender, ethnicity, and physical activity history, your performance placed you in the top*
20th percentile of your peer group. You are Ultra Healthy. You seem to subscribe to a lifestyle that supports an ultra-health - a state of health and behaviors that prevents disease, helps your body slow down aging, and has the potential to extend your lifetime. Still, don’t get too comfortable. Ultra-health requires continually following the Habits of Health, in order to remain there indefinitely. Your health is exceptional. Stay the course and continue being a shining role model for the Habits of Health.

For those randomly assigned the low efficacy condition, participants were given the following health assessment feed.

Relative to norms constructed for those of similar age, gender, ethnicity, and physical activity history, your performance placed you in the bottom 20th percentile of your peer group. Fitness levels are, in part, genetically determined, however, the greatest influence is regular physical activity or the lack thereof. Thus, poor physical condition could eventually be reversed with regular participation in an aerobic exercise program.

After reading the health inventory results given to them, participants opened a new packet with an advertisement for a gym membership and the questionnaire. Participants were given the cover story that the second packet, the advertisement, was a pre-test for a gym advertising study. When looking at the ad, the participants were advised to consider the advertisement as if they had received it in their email inbox. Furthermore, they were verbally instructed to flip over the advertisement and complete the questionnaire. Subjects were given unlimited time to examine it, and that there were no right or wrong responses.

In this ad, the visceral cues consisted of customer testimonials and before and after images. There were also details providing that participants must pay and sign up for at least twelve months. The top of the advertisement contains the gym name “Your Fitness Studio” with a barbell logo and cluster of pictures emphasizing what the gym offers, images paired with words, such as: nutrition counseling, personal training, and group fitness. Beneath these
images, the words, “FREE Membership* Until April 2015 when you sign up by February 28th!” A box next to this headline activates health and wellness goals, with the text:

No matter your goal-
From improving performance
To losing weight-
Your Fitness Studio, Texas
Delivers the best to help
You get fit, feel great and
Live healthily.

Near the bottom of the page, there is a photo of “C.J.,” a successful client. In the visceral cues present condition, there are before and after images of C.J. While the visceral cues absent text reads, “C.J. is just one of our successful clients,” in the box next to his after picture, the advertisement with visceral cues present follows, “As a 5’6” man, I weighed 186 lbs. because of bad eating habits. In 2 months, I lost 36 lbs, toned up, and gained muscle. I am now working with the Your Fitness Studio to train for a marathon!” Another before an after picture of a female is also included in the visceral cues present condition. The advertisement with visceral cues absent only provides the female’s after picture. The very bottom of the ad, in small text says, “Come into a club, visit YourFitnessStudio.com or Call 940-565-2222,” and “*a 12 month contract is required.”

The right side of the advertisement has a black background with the following words in white, “Join Your Fitness Studio by February 28th and enjoy FREE* membership until April 1st.” A yellow circle beneath says “HURRY! Offer ends soon!” Again, the advertisement designed with visceral cues absent is missing both the customer testimonials and the before pictures. Both versions of the advertisement are included in Appendix A.
Sample and Procedure

Study 3 obtained 248 usable responses, collected at a large Southwestern University. Subjects were randomly assigned to one of the three imagination thought type conditions, one of the two self-efficacy conditions, and selected to view one of the two advertisements, responding to the attached questionnaire. About 40% of the participants were male and 60% female. Forty-five percent of the subjects were between the ages of 18 and 21 and forty-six percent of the subjects were between 22 and 25. Only two participants were over 33. Most of the participants were either juniors (31%) or seniors (55%). Approximately 52% of the subjects were Caucasian, 14.9% were African American, 16.9% were Hispanic, 10.5% were Asian, 3.6% were multi-racial, and 2% self-reported as “other.”

Each subject was informed that they were participating in a study examining how daydreaming affected savings goals, as suggested by Oettingen (2012). The subjects were also verbally instructed to read the consent form and instructions. Each participant received a booklet that contained a consent form, instructions, and a questionnaire. Only after the completing the packet were they given instructions for the health inventory questionnaire online, and a second packet containing the advertising study. Following the consent form, each participant read the imagination priming instructions, which provided a description of a goal:

Think about a goal or a resolution you’ve considered lately. Maybe it has to do with maintaining your good health. It might have to do with losing weight or getting in shape. Or, it could have to do with enhancing your strength, gaining weight, or becoming more involved/improving in a physical activity. After thinking about this, write down a health & wellness-related goal that you would want to accomplish within the next year.

Next, participants were asked to write in their most important health and wellness goal that they would like to accomplish within the year, as specific a goal as possible. Following their
self-assigned goal, participants were randomly assigned an imagination thought type condition, as done by Oettingen (2012), for the contrasting, dwelling, or indulging conditions. The instructions for both conditions were the same as those described in Study 3, where the words “your goal” replaced the specific goal from Study 4 and Study 5. After completing the imagination thought type manipulation, participants completed the self-efficacy manipulation, randomly assigned to either the high efficacy or low efficacy condition. Next, individuals received one of the two versions of the advertisement with the questionnaire before being debriefed.

**Manipulation Check Questions**

Following the manipulated imagination thought conditions participants were given a sentence completion task, mirroring Study 4 and Study 5. The number of plan formulation sentence stems were added, and ranged from 0 (no plan formulation sentences completed) to 4 (all four plan formulation sentences completed), as done by Oettingen (2012). Again, participants responded to the extent to which they attribute goal success to external circumstances and personal responsibility, and individual variables, such as tendency for planning, deal proneness, current perceptions of existing health, and preference for visceral cues in advertising.

**Dependent Variables**

After completing the self-efficacy manipulation, participants were then instructed to look at the second packet with the advertisement as if they saw it in their inbox. Subsequently, they were instructed to flip the advertisement over when completing the questionnaire and to
take their time looking at the ad, considering the ad as long as they normally would when
cHECKING their inbox. Furthermore, they were reminded that there were no correct or incorrect
responses to the ad.

Participants were randomly assigned to view either the advertisement with the visceral
cues present or the advertisement with the visceral cues absent. The advertisement was for a
fictional gym membership from Your Fitness Studio (see Appendix A). The dependent variables
were the same as the previous studies, including attitude toward the gym ($\alpha = .919$) attitude
toward the ad ($\alpha = .913$), attitude toward the brand ($\alpha = .832$), and purchase intentions ($\alpha = 
.894$), reflecting an average of the 7-point scale items put forth by Spears and Singh (2004) and
Lavacak et al. (2008). See Appendix B for the scale items and Appendix C for the factor analysis.
Scales were written so that a high number indicates a positive attitude and intention, and then
averaged to form a second-order construct “attitudes” ($\alpha = .864$) to simplify analysis.

**Manipulation Checks**

Before assessing the effects of the independent variables on the dependent variables,
manipulation checks were run using a one-way ANOVA. Once again, for successful manipulation
of the imagination thought type, the contrasting condition should have a higher sentence
completion score than the indulging or dwelling conditions. The indulging and dwelling
conditions were collapsed. As expected, those in the contrasting condition had a greater
sentence completion score ($M_{\text{contrasting}} = 2.28$) than the other conditions ($M_{\text{other}} = 1.87$; $F(1,245)=$
10.86; $p< 0.01$). Therefore, the manipulation of imagination thought type was successful.
To check the successful manipulation of self-efficacy, participants responded to a single question, “Compared to my peers, I have a higher health and wellness score,” on a 7 point Likert scale from 1 (disagree) to 7 (agree). A higher score reflects a higher self-efficacy. As expected, those in the high self-efficacy condition ($M_{high} = 5.61$) reported feeling healthier than their peers compared to those in the low self-efficacy condition ($M_{low} = 3.20$; $F(1, 241) = 130.59; p < .001$).

To assess presence or absence of visceral cues in the advertisements, participants were asked about the gym ad they saw and whether the ad had “vivid images,” a “promotion with a time limit,” and “customer testimonials.” Participants responded using a 7-point Likert type scale. A one-way ANOVA was run with the visceral cue manipulation as the independent variable and the mean of the three items ($\alpha = .574$) as the dependent variable. As expected, the ad with visceral cues scored higher on visceral cue presence ($M_{visceral} = 6.15$) compared to the ad with visceral cues absent ($M_{absent} = 5.89$; $F(1, 246) = 4.36, p < 0.01$). Thus, the manipulation of visceral cue presence in advertisements was successful.

**Results of Study 6: Treating Self-Efficacy as a Moderator**

A 2 (Visceral Cues: Present vs. Absent) x 3 (Imagination Thought Type: Contrasting vs. Indulging vs. Dwelling) x 2 (Self Efficacy: High vs. Low) between subjects design was run with attitudes as the dependent variable. The results of the interaction are provided below in Table 3.10.
Table 3.10 Visceral Cues*Imagination Thought Type Effect on Attitudes

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>F</th>
<th>p</th>
<th>η^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visceral Cues</td>
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<td>.121</td>
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<tr>
<td>Imagination Thought Type</td>
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<td>.369</td>
</tr>
<tr>
<td>Self-Efficacy</td>
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<td>.483</td>
</tr>
<tr>
<td>Visceral Cue Presence*Imagination Thought Type</td>
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<td>Self-Efficacy*Imagination Thought Type</td>
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<td>.822</td>
</tr>
<tr>
<td>Visceral Cue Presence*Self-Efficacy</td>
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<td>.27</td>
<td>.195</td>
</tr>
<tr>
<td>Visceral Cue Presence<em>Self-Efficacy</em>Imagination Thought Type</td>
<td>8.22</td>
<td>.001</td>
<td>.959</td>
</tr>
</tbody>
</table>

The significant covariates include age (p< .004), external effort (p< .044), and deal proneness (p< .001). As in the prior studies, all reported p-values are for one-tail tests. Only self-efficacy had a significant main effect on the dependent variable, so that individuals with low levels of self-efficacy had a stronger ad-evoked response to the ad (M_{low} = 4.12) compared to high self-efficacy (M_{high} = 3.86; F(18, 229) = 3.71; p < 0.02). There was not a significant main effect for imagination thought type; thus, imagination thought types did not have a direct influence on attitudes (M_{contrasting} = 3.88 vs. M_{dwelling} = 4.10 vs. M_{indulging} = 3.97; F(18, 229) = 1.77; p > 0.08). For Study 3, visceral cues did not have a main effect on attitudes (M_{visceral} = 4.04 vs. M_{absent} = 3.97; F(18, 229) = 0.60; p > 0.21). Although analysis did not support a significant two-way interaction between visceral cue presence and imagination thought type (F(18, 229) = 2.34; p < .09), a significant two-way interaction between imagination thought type and self-efficacy was present (F(18, 229) = 5.15; p < 0.01). Visceral cue presence and self-efficacy did not have a significant two-way interaction (F(18, 229) = 1.21; p > 0.27). The overall three-way interaction
had a significant impact on attitudes (F(18,229)= 8.22; p< 0.001). The following analysis pieces apart the three-way interaction and discusses the predictions made previously.

According to FRT, in order to overcome the influences from distractions and pursue long-term goals, individuals have to imagine both the positive realities and the negative realities related to the goal. This is present for the contrasting condition, and explains why those individuals in the contrasting condition do not experience a visceral response to the ad with visceral cues present. If self-efficacy levels are high, then individuals already have a positive outlook on reality. Though, when in the dwelling condition, individuals imagine negative realities. When paired together, a high self-efficacy and dwelling condition should lead to lower attitudes toward the gym ad when visceral cues are present. This would also be true for those in the indulging condition and low self-efficacy, because those individuals experience both positive and negative realities. An analysis of each condition follows, segmented by imagination thought type. Figure 3.6, below, illustrates the interactions.
Contrasting Thought Type

Table 3.11, below, summarizes the results within the contrasting condition. As expected, within the contrasting condition, there are no significant main effects or interactions. With all of the covariates, only external (p < 0.06) was moderately significant. As predicted, the results replicate the contrasting interaction patterns with visceral cues present versus absent, from Study 4 and Study 5.
Table 3.11 Self Efficacy*Visceral Cues Effect on Attitudes for the Contrasting Condition

<table>
<thead>
<tr>
<th>ANOVA: Visceral cues with Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visceral Cues</td>
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<td>High Self-Efficacy</td>
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<tr>
<td>Low Self-Efficacy</td>
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<tr>
<td>Low Self-Efficacy</td>
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</tr>
</tbody>
</table>

These results are consistent with FRT and prior studies 4 and 5. For the contrasting condition, visceral cues do not impact attitudes. Furthermore, regardless whether self-efficacy is high or low, individuals in the contrasting condition imagine both positive and negative realities, and thus are prepared to deal with temptations.

Dwelling Thought Type

Consistent with FTR, it is anticipated that participants in the dwelling condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. However, given the theorizing on how self-efficacy can impact attitudes toward temptations, attitudes would only be greater for the temptation with visceral cues present when individuals only imagine negative realities. In other words, when self-efficacy is low, the interaction patterns for visceral cues will reveal similar patterns to the results from study 4 and study 5. On the contrary, when an individual in the dwelling condition experience high self-efficacy, they will imagine both positive and negative realities, then leading to dampened
attitudinal responses when presented with a more visceral temptation. So, an individual with dwelling thoughts and high self-efficacy are more prepared to deal with more visceral temptations.

An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the dwelling condition. To analyze the effects from self-efficacy, a 2 (visceral cues) x 2 (self-efficacy) ANCOVA was run. Deal proneness (p< 0.01) and age (p< 0.01) were the only significant covariates. In Study 1 and Study 2, within the dwelling condition, there was a main effect for visceral cues. However, for this study, there was a significant main effect within the dwelling condition for self-efficacy. Specifically, those in the dwelling thought type had higher attitudes when self-efficacy was low (M_{Low}= 4.64) rather than high (M_{High}= 3.62; F(10,70)= 12.76; p< 0.001). The main effect of visceral cues was not significant at the .05 level (M_{Visceral}= 4.39 vs. M_{Absent}= 3.84; F(10,70)= 2.08; p> 0.07). The two-way interaction between visceral cues and self-efficacy was significant (F(10,70)= 6.26; p< 0.01). See Table 3.12 below for the specific statistical output.

### Table 3.12 Self Efficacy*Visceral Cues Effect on Attitudes for the Dwelling Condition

<table>
<thead>
<tr>
<th>ANOVA: Visceral cues with Self-Efficacy</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F</th>
<th>p</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Self-Efficacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>43</td>
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<td>12.76</td>
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<td>.941</td>
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<td>Absent</td>
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<td>6.26</td>
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<td>23</td>
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<td>Low Self-Efficacy</td>
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</tr>
<tr>
<td>Present</td>
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<tr>
<td>Absent</td>
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</tbody>
</table>
In order to assess the influence of self-efficacy, separate ANOVAs were run within each of high self-efficacy and low self-efficacy conditions. Within the low self-efficacy condition, visceral cue presence had a heightening effect on attitudes. When visceral cues were absent ($M_{\text{Absent}} = 4.14$), individuals reported lower ad-evoked attitudes compared to when visceral cues were present ($M_{\text{Visceral}} = 5.19$; $F(8, 29) = 15.10; p < 0.001$). The interaction patterns and results were replicated from Study 4 and Study 5. For the high self-efficacy condition, individuals reported statistically similar responses to the ad ($M_{\text{Absent}} = 3.58$ vs. $M_{\text{Visceral}} = 3.67$; $F(8,34) = 0.32; p > 0.28$). Thus, for those in the dwelling condition, heightened self-efficacy decreases the visceral influence from a goal-congruent temptation, consistent with FRT and central theorizing.

**Indulging Thought Type**

According to FRT, it is expected that participants in the indulging condition would have higher attitudes for the ad with visceral cues present than the ad with visceral cues absent. However, theory suggests attitudes would only increase for the temptation with visceral cues present when individuals experience a positive-only reality. On the contrary, when they experience low self-efficacy alongside indulging though types, they should experience a decreased attitudinal response when presented with a more visceral temptation.

An ANCOVA was used to examine differences among the advertising conditions, isolating those participants in the indulging condition. To analyze the effects from self-efficacy, a 2 (visceral cues) x 2 (self-efficacy) ANCOVA was run. There were no significant covariates. In Study 4 and Study 5, within the indulging condition, there was a main effect for visceral cues. However, for this study, there were no significant main effects. The two-way interaction
between visceral cues and self-efficacy was significant \((F(10,71)= 15.89; \ p< 0.001)\). See Table 3.13 below for the specific statistical output and results for the main effects.

Table 3.13 Self Efficacy*Visceral Cues Effect on Attitudes for the Indulging Condition

<table>
<thead>
<tr>
<th>ANOVA: Visceral cues with Self-Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visceral Cues</td>
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<tr>
<td>----------------</td>
</tr>
<tr>
<td>High Self-Efficacy</td>
</tr>
<tr>
<td>Low Self-Efficacy</td>
</tr>
<tr>
<td>Present</td>
</tr>
<tr>
<td>Absent</td>
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<tr>
<td>High Self-Efficacy</td>
</tr>
<tr>
<td>Absent</td>
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<tr>
<td>Low Self-Efficacy</td>
</tr>
<tr>
<td>Absent</td>
</tr>
</tbody>
</table>

In order to assess the influence from self-efficacy, separate ANOVAs were run within each of high self-efficacy and low self-efficacy conditions. Within the low self-efficacy condition, visceral cue presence decreased attitudes. When visceral cues were absent \((M_{\text{Absent}}= 4.50)\), individuals reported higher ad-evoked attitudes, while the presence of visceral cues had a negative effect for individuals in the low self-efficacy condition \((M_{\text{Visceral}}= 3.13; F(8, 31)= 13.65; p< 0.001)\). Thus, experiencing a negative present reality with indulging positive thoughts leads to an increased resistance to visceral cues. For the high self-efficacy condition, individuals reported higher attitudes toward the ad with visceral cues present \((M_{\text{Visceral}}= 4.41)\) versus when they are absent \((M_{\text{Absent}}= 3.86; F(8,33)= 3.44; p> 0.03)\). The findings for the high self-efficacy condition replicate the results from Study 4 and Study 5. Thus, for those in the indulging condition, high self-efficacy decreases the visceral influence from a goal-congruent temptation, consistent with FRT and theorizing.
Summary of Study 6 Results

The results of study 6 provide support for the claim that individuals with indulging, dwelling, and contrasting thought types have differing levels of self-efficacy when exposed to a visceral temptation, underlying the results obtained in studies 4 and 5. Specifically, the results provided evidence that when participants were given self-efficacy levels consistent with their thought types (e.g. dwelling with low self-efficacy or indulging with high self-efficacy), the results from studies 4 and 5 were replicated. This was also true for the contrasting thought type, when given either level of self-efficacy. However, when participants were given self-efficacy levels inconsistent with their thought types (e.g. dwelling thoughts with high self-efficacy or indulging thoughts with low self-efficacy), the interaction patterns from studies 4 and 5 were eliminated.

More specifically, when participants engaged in imagined thought type patterns consistent with contrasting thoughts, the urgings from visceral cues was overcome. Thus, individuals experiencing both positive and negative realities have a higher resistance to visceral cues in advertising and this occurs in three instances: contrasting thoughts, indulging thoughts alongside low self-efficacy, or dwelling thoughts alongside high self-efficacy. When individuals experience a one-sided reality only, by imagining only the positive realities or only the negative realities, they are more prone to the influence from visceral cues and the results from studies 4 and 5 were replicated. There are two conditions from which a one-sided reality exists: indulging thoughts with high self-efficacy or dwelling thoughts with low self-efficacy. These results are consistent with and support the theorizing about the role of self-efficacy in the interaction
between visceral cues and imagination thought type on attitudes toward goal-related temptations.
Chapter 4 – Conclusions and Discussion

Consumers are frequent goal-setters but often experience trouble keeping their resolutions. The staggering facts behind New Years Resolutions supports the timeliness of this research. For instance, the start of the year, gym memberships rise sharply. Yet, after the Super Bowl, gym attendance already sees a decline. This research looks to identify how individuals can overcome temptations and more successfully pursue their goals. Based on the imagination thought type ideas put forth by Oettingen (2000), individuals can have improved opportunities to experience goal success. Furthermore, Loewenstein (1996) argues that individuals may deviate from goals if they experience a guttural, visceral reaction to stimuli. The research suggests that attitudes toward promotional material are key measured variables indicative of goal commitment, based on FTR and TVI.

The research presented here attempts to answer four specific questions about how individuals engaged in different imagination thought types experiences temptations when those temptations are more visceral or not. Specifically, the research seeks to answer:

1. How does the imagination moderate the effect of goal-incongruent visceral temptations on ad-related thoughts?

2. How does the imagination moderate the effect of goal-congruent visceral temptations on ad-related thoughts?

3. Does self-efficacy mediate the relationship between the interaction of imagination thought type and visceral temptations and ad-related thoughts?

4. When including self-efficacy as a moderator, how does the relationship between the interaction of imagination thought type and visceral temptations impact attitudes?
To answer these questions, three main effect studies and three additional studies were conducted that manipulated imagination thought type and visceral cue presence in promotional advertising. The fifth study measures self-efficacy and a sixth study manipulates self-efficacy. Over 600 individuals participated in all of the studies over a year by viewing one of two ads, in each experiment, from a fictitious organization.

General Conclusions

The first three studies establish the manipulations and successful use of goal priming instructions. Additionally, while Study 2 does not provide useful results, it does support the use of allowing individuals to self-select their goals for Study 3 and Study 6. Study 1 and 3 indicate that imagination thought type regulates the impact of visceral cue presence in a goal-related advertisement. For ads that are both congruent and incongruent to long-term goals, contrasting thoughts are most helpful in diminishing ad-evoked thoughts.

Study 4 responds to the first research question and identifies how imagination regulates the impact of visceral cues inconsistent with goals, by examining how goal-incongruent advertisements affect individuals’ responses. In general, the results of study 4 suggest that individuals with a goal of saving money are more responsive to a temptation to spend money on a cruise featured in a promotional advertisement when that advertisement has more visceral cues. In the indulging and dwelling imagination thought type conditions, participants reported higher promotional attitudes when they saw the ad with visceral cues present, such as customer testimonials and a promotional offer with a time limit. However, those in the contrasting imagination thought type did not experience the same visceral response to the ad
with the promotional offer and testimonials. On the contrary, their reactions to the ad with visceral cues present was similar to their reactions to the ad with visceral cues absent. Only those participants in the indulging and dwelling conditions experienced a stronger, visceral reaction to the ad with visceral cues present.

Study 5 sought to answer research questions two and three, first, looking at how imagination regulates the impact of visceral cues consistent with goals, by examining how goal-congruent advertisements affect individuals’ responses, and, second, testing the mediator self-efficacy. The results of study 5 provides evidence that individuals with a goal of saving money are responsive to an alternative route to achieve their savings goals when goal-congruent ads have visceral cues present. A savings program that exacts a monthly cost was used as the fictitious service advertised. Like in study 4, those participants in the indulging and dwelling imagination thought type conditions reported higher promotional attitudes when they saw the ad with visceral cues present, such as customer testimonials and a promotional offer with a time limit. However, those in the contrasting imagination thought type did not experience the same visceral response to the ad with the promotional offer and testimonials. On the contrary, their reactions to the ad with visceral cues present was similar to their reactions to the ad with visceral cues absent. Those participants in the indulging and dwelling conditions experienced a stronger, visceral reaction to the ad with visceral cues present, compared to those in the contrasting condition.

Furthermore, Study 5 measured self-efficacy as a mediator between the interaction of visceral cues and imagination thought type and promotional advertisements. Based on the results, it appears that self-efficacy mediates only two of the three imagination thought type
conditions: contrasting and dwelling thoughts. Thus, those in the dwelling condition had lower self-efficacy that triggered a heightened attitudinal response to a tempting promotional advertisement with visceral cues present. On the other hand, participants in the contrasting thought type condition reported higher self-efficacy, which led to lowered attitudinal responses to tempting promotional advertisements with visceral cues present. The self-efficacy levels of those in the indulging condition were higher than those individuals in the dwelling condition, but the findings do not support a mediating relationship for those in the indulging condition between visceral cues and promotional attitudes.

Study 6 continues to examine the role of self-efficacy on the interaction of imagination thought type and visceral cues, responding to Research Question 4. The findings provide support for contrasting imagination thought type as critical for successful goal pursuit, as well as the role that self-efficacy plays in overcoming visceral temptations. The results show that experiencing both positive and negative realities are critical for overcoming obstacles and alternatives to goal pursuit. Specifically, indulging and dwelling thoughts only examine a single reality, either success with a goal or the obstacles that could prevent success of a goal, and so these imagination thought types are still sensitive to visceral cues. When individuals experience self-efficacy levels inconsistent with the imagination thought types (e.g. indulging thoughts with low self-efficacy or dwelling thoughts with high self-efficacy), they are more prepared to deal with visceral influences. In these cases, self-efficacy can help individuals experience the same mental preparedness that occurs within the contrasting imagination thought type. That is, when self-efficacy provides the complementary reality for the individual, the individual is less receptive to visceral temptations that are congruent with long-term goals. This explains why
the contrasting condition is effective for overcoming visceral temptations. Experiencing both positive and negative realities of a goal provide for a high enough level of self-efficacy to accomplish a goal, and overcome the visceral urgings from visceral temptation.

In sum, the dissertation offers new insight into imagination thought type combined with visceral cues’ influence on promotional attitudes, in two goal contexts. For the two goal contexts, health and wellness and saving money, individuals are more prepared to deal with the psychological affects when exposed to visceral cues if they imagine the positive consequences of achieving the goal alongside the negative realities that stand in the way of the goal. Future research is needed to explore boundary conditions, identify other mediators, and to identify ways of integrating imagination thought type into advertising.

**Contributions**

The dissertation contributes to the fields of consumer behavior in several ways. First, theoretically, the research identifies how individuals’ imagination thought type builds or dampens self-efficacy, which then determines how individuals respond to promotional temptations. Second, the research bridges two theories, FTR and TVI, to account for individuals’ goal commitment versus goal failure. Third, the research provides for several methodological contributions stemming from several studies that answer each research question. Fourth, concerning managerial implications, the research provides evidence that institutions can provide individuals with goals, helping individuals to manage their goal pursuit in a more effective manner. Fifth, the research highlights several instances where individuals may be vulnerable to the influences of visceral cues. Should policymakers create policy to protect the
members of society more vulnerable to visceral cues? Each contribution is discussed in more detail in the following sections.

Theoretical Contributions

First, this research addresses the gap in the literature, identifying how individuals’ imagination thought type builds or dampens self-efficacy, which then determines how individuals respond to promotional temptations. As opposed to Oettingen (2000) who examines goal progress through variables such as goal commitment or energization, this research investigates how individuals respond to temptations opposed to their individual direct efforts toward their goals. The findings suggest that individuals, provided with sufficient resources for goal regulation, can prevail over visceral temptations. In effect, this reduces their susceptibility to visceral influences.

More specifically, imagination works to increase goal effort via self-efficacy. The underlying influence of self-efficacy determines how imagination regulates the impact of visceral cues inconsistent with goals and as an alternative route to a goal. For instance, by imagining goal success and negative temptations, an individual will save more and spend less. In a similar regard, individuals who have a savings goal will less likely look to a program to help them save money when they imagine future success and obstacles to the goal. Individuals who contrast future potential with negative impending realities are more prepared to overcome temptations, and will respond to promotional stimuli with or without visceral cues similarly.

The scholarship also contributes new perspective on goal research, extending our understanding of how the cold system works within the Theory of Visceral Influences (TVI), as
an intervention between temptations and visceral responses. When presented with a promotional offer, a consumer engaged in contrasting activates the cool system. With the cool system, the consumer processes the promotional offer less emotionally. As a consequence, individuals act less on visceral urgings.

Second, this research makes theoretical contributions to goal research, imagination thought type, visceral cues in promotional advertisements, promotional attitudes, and self-efficacy by integrating literature on TVI, literature on FRT, promotional advertising, and self-efficacy literature to examine the effectiveness of imagination thought type and tempting promotional advertising on individuals' responses to promotional ads with visceral cues. Specifically, the results extend the TVI to include imagination as a goal regulation mechanism, capable of decreasing consumer vulnerability to visceral influences. While current scholarship corroborates visceral cues as undermining goals, the current study contributes new evidence, which supports the imagination as helpful in goal pursuit. In addition to outlining how contrasting imagination thought type is beneficial while pursuing goals, this research attempts to clarify how the variables intertwine to affect how individuals' visceral urgings are enhanced or dampened.

Study 6 extends the Theory of Visceral Influences to explain hot and cold conflicts, through the mechanism of self-efficacy, as a moderator of the interaction between imagination thought type and visceral cues on promotional attitudes, and showcases why the contrasting condition is helpful for overcoming temptations. Experiencing two future realities, positive and negative, are critical for overcoming visceral temptations and pursuing long-term goals.
Methodological Contributions

Third, the research establishes several manipulations in advertisements and priming instructions throughout a series of studies. A total of six studies are conducted, and thereby address each of the research questions, establishing conclusions about goal-incongruent temptations and goal-congruent temptations.

Managerial Contributions

Fourth, concerning managerial implications, the research provides evidence that an individual is more receptive to alternative means of accomplishing a goal when self-efficacy is too low. In this case, consumers with lower levels of self-efficacy are more susceptible to temptations. Marketers advertising products or services providing an alternative way of achieving goals can use promotional offers with time limits, customer testimonials, and before and after pictures to enhance promotional attitudes. While some of these alternative routes of achieving a goal are designed to scam a consumer or may be contrary to the long-term interests of consumers, such as diet pills, there are other marketers that can benefit by using these cues. Jenny Craig and Weight Watchers frequently employ before and after images, celebrity testimonials, and other efforts to gain consumers. Goal-consistent visceral cues may propel previously unprepared consumers to goal-consistent action, as an alternative route to goal success.

Pro-social marketers are designed to help consumers make better decisions (Dickson and Holmes 2008). Some marketers design campaigns to improve the current situations of consumers and society. One such campaign by Adidas understands the fundamental differences
between professional athletes and regular individuals. Besides natural talent and physical skills, professional athletes also utilize a mental approach. Athletes use their imaginations to overcome obstacles in a game, foresee future moves, and play better. When faced with obstacles, regular individuals often dwell on potential failure. While regular individuals are focused on failure, professionals are cued in on success, practicing what they imagine (McCarthy 2015). Adidas has tapped into this insight with their new campaign “Sport 15,” highlighting these differences (https://www.youtube.com/watch?v=uiQVkoDLBbQ&feature=youtu.be).

Through promotions and advertising, a marketer can make goal suggestions to consumers, and simultaneously provide instances of imagined success, the temptations, and a solution to achieving the goal. This is exactly what Adidas does. If goals can be manipulated, marketers can stimulate consumer action by providing consumers with a goal and afterward, provide them with contrasting thoughts. This may include advertising, special events, digital technologies, and so forth. At the same time, marketing managers can increase the productivity of their sales force by providing their salesmen with goals and ensuring these salesmen engage in contrasting thoughts.

Fourth, the research highlights several instances where individuals may be vulnerable to the influences of visceral cues, as called for by Amos and Spears (2010). TVI provides evidence that certain individuals are more vulnerable to visceral cues in promotional advertisements (e.g. younger and those more chronically stressed) [Loewenstein 1996]. The findings also support that age affects vulnerability to visceral cues. This research also provides support that certain demographic groups are also more vulnerable to visceral influences, including: those
with lower educations, those who are more deal prone, and those who prefer to see visceral cues in marketing efforts. Because certain groups are more vulnerable to visceral cues, this raises several ethical issues. First, should pubic policy regulate how marketers use visceral cues in advertisements, especially those targeting more vulnerable populations? Second, what is the role of government in helping more vulnerable groups to increase their self-efficacy so that they are not vulnerable to visceral cues?

Prior researchers have found nutrition labeling ineffective (Hassan et al. 2010). Though, the government could mandate the use of more obvious cues on the package of food products to signify certain meanings. Not all visceral cues work to urge consumers toward an action. There are also visceral cues that urge consumers to turn away from a negative offer. The government can use these negative cues by integrating vivid symbols into food labels, such as color coded fat content (e.g. where green signifies a healthy choice, yellow would mean borderline, and red would symbolize completely unhealthy).

Pubic policy makers may consider segmentation approaches to regulation, whereby they identify vulnerable populations for certain societal epidemics, such as obesity and credit card debt. Next, they can develop regulatory approaches using positive and negative visceral cues to demarket ideas to certain vulnerable groups or regulate how marketers can target these consumers, from the obese to smokers.

One restaurant, the Heart Attack Grill, boasts that it kills its customers. Their signature burger, called the Quadruple Bypass Burger, weights 3 pounds and contains almost 10,000 calories. The décor inside resembles a hospital with staff wearing nurse and doctor outfits. The customers are treated as patients and even don hospital gowns. Sadly, anyone over 350 pounds
eats for free (Willett 2014). Their prior spokesperson Blair River died at age 29 because of issues related to his weight. Another person John Alleman the paid mascot, died of a heart attack after leaving the restaurant in 2013 (Greenfield 2014). Because it is legal, they are allowed to sell food that is bad for individuals’ health and advertise using visceral cues, such as this one on YouTube (https://www.youtube.com/watch?v=ZjSe8T0kC34). The ad talks about eating for free and not having to worry about the health consequences since everyone has free health care now.

Going forward, the U.S. government can implement approaches that teach the public how to use their imagination to overcome temptations, such as credit card usage or unhealthy foods. Additionally, lawmakers can determine what is in the best interests of society and consumers, and create laws to designate what business can offer consumers and the way in which they communicate with consumers. Although New York City lost the battle in the end, policymakers and Mayor Bloomberg attempted to ban Big Gulp sized drinks in New York City. The idea was to limit the caloric intake of customers and fight obesity (John 2014). Does this solve the weight epidemic? No, but this is just one positive step forward that can help society when society is not in the state of mind to objectively make decisions that affect its own long-term interests.

Limitations

Like with other research, this dissertation study also has its limitations. First, studies one and three use student subjects. Therefore, any generalizations made from the findings in Study 1 and Study 3 should be interpreted with care. Second, there was a lack of experiment control
for the pretests and Study 2. All pretests were conducted within the undergraduate student classrooms during regular class time. Study 2 was conducted on MTurk through Qualtrics, and thus individual participants were exposed to the experimental manipulations online. While quality control questions were put in place to ensure attention, the environments where the participants accessed the questionnaire was unknown.

In Study 2, I attempted to control for time until which the promotional offer will expire, preference for visceral cues in marketing communications, current perceptions of health, and individual differences, there are multiple aspects that were not controlled for, such as Body Mass Index (BMI), involvement, chronic regulatory focus, and more. All brands used in the ad were fictitious, though using actual brands may ultimately affect visceral responses to these advertisements. For instance, by using Carnival Cruise brands, the advertisement could have increased legitimacy which would then impact attitudes and purchase intentions.

All studies use a self-reported measure of attitudes and purchase intentions. Having subjective measures, as opposed to behavioral measures, is belief-based but does not imply actual behavior. An opportunity exists for field experiments assessing actual behavior.

**Future Research**

Prior research demonstrates that beliefs and intentions ultimately determine actual behavior (Fishbein and Ajzen 1975). Though, integrating a behavioral dependent variable would add to the validity of the research findings. Future research can use a dieting goal with imagination thought type manipulated, offering participants limitless candy as a thank you,
used as the dependent variable. Other potential dependent variables include skin conductance tests, salivation, brain activity, EMG responses, and heart rates.

Additionally, self-efficacy was determined to be the driver of the relationship between the interaction of imagination thought type (dwelling and contrasting) and visceral cues on promotional attitudes. A future study can examine the underlying influence of indulging thoughts, why indulging thoughts lead to impulsive thoughts toward promotional advertisements. Additionally, future research could examine boundary conditions, such as goal difficulty and time to take advantage of the promotional deal. Although time until the deal expired was not a significant covariate in Study 2, future research project could manipulate time until the deal expired to determine if this affects visceral influences for the different imagination thought type conditions.

A future research project can look at imagination thought type manipulated through the advertisement, like the Adidas and Heart Attack Grill ads, instead of primed for the individual. Pro-social marketers could especially activate goal commitment if contrasting thoughts can be manipulated through an advertisement. Looking at different types of marketing communications, such as audio-video or audio only messages, might also provide another avenue for future research.

Prior research has not shown that certain behaviors, such as smoking is capable of being overcome. However, this study should be extended to account for legitimately addictive behaviors to determine if imagination thought type is capable of overcoming long-term addictions. Finally, the research should be applied to other disciplines of pro-social marketing to
determine how messages can become more effective and which cues are stronger visceral drivers.

Additionally, it would be worthwhile to examine real ads, perhaps through a content analysis. From a historical advertising perspective, managerial strategies employed in the ads could be evaluated, first, before obtaining consumers’ responses to the advertisements, representing members of the public.
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APPENDIX A: ADVERTISEMENTS

Study 3 Advertisement - Visceral Cues Absent

BigCruise Company

Western Caribbean Cruise & Tour
Spring Break 2014

6 Days!
The Largest Party at Sea!

Book Today

Experience some of the world's most beautiful sights with a BigCruise Company cruise, from the ancient wonders of Cozumel to the exotic Belize City. Wherever your port of call, you'll find a party onboard our modern fleet! Enjoy our special Spring Break Cruise with all you can eat food and free cocktails all cruise long!

To find out why BigCruise Company is YOUR spring break cruise visit BigCruiseCompany.com

Cruises starting from $399 per person
Book today!
BigCruise Company

Western Caribbean Cruise & Tour
Spring Break 2014

6 Days!
The Largest Party at Sea!

Book Today

Experience some of the world's most beautiful sights with a BigCruise Company cruise, from the ancient wonders of Cozumel to the exotic Belize City. Wherever your port of call, you'll find a party onboard our modern fleet! Enjoy our special Spring Break Cruise with all you can eat food and free cocktails all cruise long!

To find out why BigCruise Company is YOUR spring break cruise visit BigCruiseCompany.com

"Best Time of my life! From the food to the bottomless umbrella drinks...totally memorable experience". - Amy

"My last spring break before graduation was awesome! #YOLO". - @MarkDawes

Cruises starting from $399 per person
Book by February 29th and get an extra 10% off!