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APPROACH/AVOIDANCE MOTIVATION:  
EXTENSIONS OF THE CONGRUENCY EFFECT

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May, 2006

Submitted in partial fulfillment of requirements for the degree

MASTER OF ARTS IN PSYCHOLOGY

at the

CLEVELAND STATE UNIVERSTIY

June, 2008

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APPROACH/AVOIDANCE MOTIVATION:  
EXTENSIONS OF THE CONGRUENCY EFFECT  
AMANDA C. HAMMILL  
**ABSTRACT**

Messages are more effective when framed to be congruent with individuals' approach/avoidance motivation (Sherman, Mann, & Updegraff, 2006). Two experiments explored whether congruency might also effect consumer reactions by examining whether person-message fit enhances enjoyment of taste of a product, increases how fluid an advertisement is perceived to be, and heightens one's willingness to buy a product and the overall product value. Study 1 demonstrated a congruency effect, where avoidance motivation scores positively predicted perceptions of taste/enjoyment of a sugar-free food, but only when the product advertisement was loss-framed. In the loss-frame condition, higher avoidance scores also related to increased ratings of advertisement quality. Unexpectedly, congruency effects were not found under gain-frame conditions. Study 2 examined if congruency effects would be accented in group settings. A main effect was expected, where participants in the group condition would rate the outcome variables higher than those in the individual condition. Study 2 demonstrated an accentuation effect, but not as expected. Overall this study broadens our awareness of factors that interact to influence attitudes, and perceptions of taste and message quality.

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## CHAPTER I

### INTRODUCTION

A primary goal of consumer research is to know and understand the factors that influence consumers' attention, motivation, decisions and preferences. The majority of the work in this field attempts to understand the buyer decision-making process. Most experts agree that consumers make purchase decisions dependent on their needs and desires and that the strength of these forces is shaped by various aspects of the person and the product. For example, one consumer may purchase a product because it is perceived as reliable whereas another consumer may purchase the same product based on its stylish design. If individual differences in desires and needs are driving consumers' behaviors, then it will be informative to more carefully examine various ways in which individual differences shape consumer attitudes and choices.

In recent years the emergence of a set of theories have provided theorists and researchers with a potential framework for explaining and predicting how differences in particular individual orientations might influence consumers' perceptions and responses to messages and products. Specifically, self-regulation studies have started to identify conditions and mechanisms that may add great value to consumer research. Self-regulation, which will be described in more detail shortly, has been explored by psychologists from a variety of sub-disciplines (e.g., clinical, personality, social). Consequently, a number of self-regulation

theories and frameworks currently exist. These different theories are similar in that they all view self-regulation through the workings of two separate systems that activate either approach or avoidance motivation (Carver & Scheier 1981, 1990).

Two of the more popular self-regulation frameworks, which are also relevant to the current paper, refer to these motivational orientations as: behavioral approach (BAS)/inhibition (BIS) (Gray 1987, 1990) and promotion/prevention focus (Higgins 1997, 1998). Initially, these theories were intended to be conceptually distinct from one another (Higgins, 1997), however, they share many similarities and over the years their respective components have been used interchangeably (e.g., approach/promotion; inhibition/prevention) and are often presumed to be synonymous. The current research is not designed to disentangle any similarities or differences that exist between these constructs. Instead, the current research presumes these theories are alternative ways to characterize self-regulation via approach and avoidance motivation, and utilizes aspects from both theoretical frameworks in efforts to broaden the current understanding of consumer behavior.

### *Self-regulation Theories*

Self-regulation systems are used to control, guide and regulate affective, cognitive and behavioral activity (Bandura, 1997). To do so, these systems often incorporate a frame of reference that serves as an end-point that is to be reached (desired end-point) or avoided (undesired end-point). The process of self-regulation involves assessing one's current state and then either motivating movement towards the desired end-point or motivating movement away from the undesired end-point. Higgins (1987) called these positive end-points ideal self-guides and ought self-guides. Ideal self-guides are an individuals' depictions of their self, or others', hopes, wishes, or aspirations for them. The ought self-guide is an

individuals' depictions of their self, or others', beliefs about their duties, obligations and responsibilities. Self-regulation occurs as people strive to eliminate discrepancies between actual and desired end-states and try to expand the discrepancy between actual and undesired end-states.

Higgins (1997, 1998) expanded his self-regulation theory and suggested Regulatory Focus Theory (RFT), which further defines two regulation systems. Higgins suggests that one system regulates the avoidance of punishment or losses and focuses on a prevention goal. The other system regulates the achievement of rewards and gains and focuses on a promotion goal. Therefore, people can either direct their effort toward fulfilling obligations and avoiding losses or toward achieving ideals and making gains depending on their regulatory orientation or state (Werth & Forster, 2006).

Relatively stable regulatory orientations can develop as a result of numerous factors such as physiology, socialization, psychological needs, and individual goals. In relation to self-guides, those whose self-regulation generally emphasizes eliminating discrepancies with their "ideal self" are said to be promotion-focused. Their natural tendency is to apply strategies that focus on avoiding mismatches to their goals. For example, if the goal is to get an "A" on an exam, a promotion-focused individual would study and apply strategies that emphasize "DOING" or elicit "approach" behaviors (e.g., reading additional materials). Conversely, a prevention-focused individual would study and apply strategies that emphasize "NOT DOING" or "avoidance" behaviors (e.g., not partying the night before the exam). As these hypothetical examples illustrate, the goal of getting an "A" on an exam is similar across both examples, and it is only the manner and framing of the goal pursuit process that differs.

Gray (1987, 1990) described the two different regulatory systems as the Behavioral Inhibition System (BIS) and the Behavioral Approach System (BAS). The purpose of the BIS is to keep the organism out of trouble by helping the organism avoid aversive stimuli. The BIS can be thought of as a “stop, look and listen” system that promotes vigilant scanning of the environment for potential threats, and when this system is activated one is particularly motivated to avoid negative consequences. The second system, BAS, is a behavioral approach system, rather than an avoidance system, that directs organisms towards situations and outcomes that potentially result in pleasure or rewards. When this system is active attention is directed towards positive reward cues and one is particularly motivated to attain positive outcomes.

It is again important to note that because there is such an overlap amongst self-regulation theories, the literature often uses the terms describing the two core regulation systems interchangeably. Avoidance motivation and inhibition corresponds to prevention-focus and approach motivation is synonymous with promotion-focus. For ease of exposition I will refer to prevention focus as being associated with avoidance motivation and inhibition and promotion focus as being associated with approach motivation.

#### *Regulatory Orientation and Goal Motivation*

In explaining the relevance and utility of regulatory focus theory, it is important to describe how regulatory orientations control behaviors and attitudes when attaining a goal. Promotion-focused goals include growth and advancement whereas prevention-focused goals include safety and security. The two different goals stimulate people to pay more attention and highlight specific information that helps them to achieve a goal (Higgins, 1997). Those with promotion goals are more receptive to the idea of gains and non-gains and frame



accomplishments through the lens of success (e.g., I reached my goal by doing well), while those with prevention goals are more receptive to losses and non-losses and frame accomplishments through the lens of avoiding errors (e.g., I reached my goal by not messing up). In the consumer world, the promotion-focus in action would be a consumer who purchases a product like a wristwatch because it is exciting, beneficial or can help them achieve some gain (e.g. being on time). On the other hand, a more prevention-focused consumer would look more for safety and reliability in a product, or a product that would help them prevent some type of negative consequence (e.g. not being late).

Extending on the idea that promotion-focus individuals strive for matches to their goals, it has been suggested that these individuals may experience an eagerness to include as many options as possible when striving to achieve their goals (Zhu & Meyers-Levy, 2007). On the other hand, because prevention-focus individuals concentrate on avoiding mismatches to their goals, they may experience a sense of vigilance that will lead them to consider more precautionary and clearly appropriate options to avoid mistakes and achieve their goals. Evidence of this eagerness versus vigilance viewpoint has been shown in creativity tasks and hypothesis generation activities. Crowe and Higgins (1997) found that individuals with a promotion-focus have been found to generate a more diverse array of items on a creativity task. It has also been shown that promotion-focused individuals engage in more exploratory processing, resulting in more creative ideas when compared to prevention-focused individuals (Friedman & Forster, 2001).

In hypothesis generation activities where stimuli were ambiguous, Liberman, Molden, Idson, and Higgins, (2001) found that promotion-focused individuals generated numerous hypotheses about the character of the stimuli. They concluded that these individuals were

apparently eager to discover an optimal hypothesis. On the same task, individuals that were prevention-focus only generated a few hypotheses, indicating vigilance in limiting the possibility of a more erroneous hypothesis.

## CHAPTER II

### REGULATORY FIT

The idea of regulatory focus has been built upon with the notion of regulatory fit. Regulatory fit, also known as a congruence effect, is an increased motivational intensity, resulting from a match between the way a person is asked to pursue a goal and his or her goal orientation (promotion or prevention-focused). For example, promotion-focused individuals who eagerly simulate and develop *approach-oriented* plans have enhanced motivational strength compared to promotion-focused individuals who vigilantly simulate and develop *avoidance-oriented* plans. Whereas, prevention-focused individuals who vigilantly simulate and develop *avoidance-oriented* plans have enhanced motivational strength compared to individuals with a prevention-focus who eagerly simulate and develop *approach-oriented* plans (Spiegel, Grant-Pillow & Higgins, 2004).

In addition to increased motivation, Avnet and Higgins (2006) suggested that people will experience a sense of fit or an “it just feels right” experience when they take on activities or engage in goal pursuit strategies that are congruent with their goal orientations. It has been shown that attitudes can become more favorable when messages contain information that addresses a person’s regulatory interests. Congruence will also intensify peoples’ evaluations and opinions about the product being advertised, and make them more susceptible to persuasion and strengthen confidence in decisions towards the message being advocated (Avnet & Higgins 2006; Bettman & Sujan 1987; Cesario, Grant, & Higgins, 2004; Higgins

2002; Keller 2006; Lee & Aaker 2004; Sherman, Mann & Updegraff, 2005). Additionally, the “it just feels right” experience can enhance importance of reactions, amplify engagement in reactions and effect perceptions of value and enjoyment (Avnet & Higgins, 2006).

#### *Regulatory Fit and it's Fit in Consumer Behavior*

There is a great deal of research that has studied how congruence influences perceptions by way of message framing, especially in health related fields (Keller, 2006; McCaul, Johnson, & Rothman, 2002; Rothman, Bartels, Walschin, & Salovey, 2006; Rothman & Salovey, 1997; Sherman, Mann & Updegraff, 2005). For example, prevention-focused individuals feel a fit and are more compliant to a message that expresses how brushing can lead to the *avoidance* of negative consequences (e.g., brushing prevents rotting of teeth). Conversely, promotion-focused individuals pay more attention and are more likely to brush their teeth if they read a message that explains the *benefits* of brushing (e.g., brushing leads to strong/healthy teeth).

The concept has also been introduced into the consumer psychology field. People assign higher monetary values to the same product when the product is introduced in a way that is congruent with ones' regulatory focus (Avnet & Higgins, 2006; Camacho, Higgins, & Luger, 2003; Higgins, Idson, Freitas, Spiegel, & Molden, 2003). Camacho, Higgins, and Luger (2003) also showed that individuals rated objects as being of more importance when they experienced regulatory fit. Paulssen and Bagozzi (2005) also found that compatibility of attributes to current regulatory goals had an influence on consumer behavior in that they determined which brands consumers see as relevant choice options.

Beyond attributes of value and choice options it has also been shown that the effect of regulatory fit can increase persuasion. Cesario, Grant and Higgins (2004) showed how

regulatory fit is useful in development of advertisements, slogans and other persuasive media. They discovered that promotion-focused participants were more persuaded by messages that exemplified eager means to reaching a goal. In comparison, participants in a prevention-focus were affected more by a message that stressed vigilance. Furthermore, it was shown by Aaker and Lee (2001) that individuals with a chronic promotion orientation are more strongly convinced by promotion-oriented information and individuals with a chronic prevention orientation are more strongly convinced by prevention-oriented information.

These previous studies show that self-regulation systems influence consumer attitudes and behaviors. The current study is designed to contribute to the field by examining areas that have not yet been considered or researched. Specifically, these studies have been designed to contribute to the field by exploring the influence of regulatory fit on sensory perceptions such as taste.

Taste is an important factor when it comes to purchase intent and overall product evaluation. According to the Food and Marketing Institute (1993), taste is the number one criteria, used by an escalating number of consumers, in making purchasing decisions about foods and beverages. People do not want to waste money on things that do not taste good. Companies and marketers spend a lot of time and money investing in products that taste great and just as much, if not more money, in conveying the message that their product tastes great. Evidence of this is seen in product comparisons like taste-tests and in using slogans like Diet Coke's "Just for the taste of it".

Often people assume that taste is a function of the ingredients, but in actuality, there are other factors other than the food content that can shape taste. For example, Hoegg and Alba

(2007) have shown that the color of a drink can impact how sweet people think the drink is. They manipulated orange juice with food coloring and found that the tint of the orange juice had an effect on the taster's perceptions. Participants perceived differences in taste when the orange juice was darkened with food coloring even though no objective taste difference existed. And, when they gave participants two cups of orange juice that were the same color, with one sweetened with sugar, the participants failed to perceive the taste difference. These results demonstrate that taste perceptions can be guided by factors independent from the product itself (e.g., expectations).

The current study will explore other potential influences on taste. More specifically, if the perception of taste can be enhanced when a message is framed in a way that induces regulatory fit. This study will also explore whether constructs like ad fluency or positive affect, which should correlate conditions of fit, will mediate the relationship between motivational orientation scores and outcomes such as taste and product value.

The current studies are also designed to test whether the previous types of regulatory fit effects found by others will be replicated within the contexts of a consumer behavior study. This research will see if congruence will enhance memory of an advertisement and enhance advertisement validity. Additionally, this study will see if regulatory fit increases one's willingness to recommend a product, raise the perceived value of a product, increase purchase intent, and boost confidence in decision making.

#### *Creating the Advertisement, Framing the Message*

Situations that relate to promotion or prevention-focus can be structured deliberately and therefore, can also be used in experimentation (Werth & Forester, 2006). In this study, product frame is manipulated by the use of two different regulatory focused advertisements.

Participants received either a promotion-focused or a prevention-focused advertisement. Figure 1 illustrates examples of both promotion and prevention-focused advertisements that have been used in previous studies. Advertisements for the current study were created by closely modeling these examples. In each of the previous studies, the product was the same for each condition and the framing of the message was the only thing being manipulated. The current study followed this approach.

Crowe and Higgins (1997) have differentiated the concerns of promotion and prevention-focus and these ideas were implemented in creating the advertisements used in this study. Promotion-focused advertisements stress interest in advancement, improvement, growth and achievement. The goals of these types of messages emphasize hopes and aspirations and the drive to progress by approaching matches to a desired end-state. It is a gain versus non-gain context and explains how one will benefit from purchasing the advertised product. As suggested by Avnet and Higgins (2006) the promotion-focused message used in this study expresses excitement and embraces eagerness to attain advancement and gains. The promotion-focused message also includes ideas that help people with the realization of positive goals. The product aspects highlighted in the promotion-framed advertisement are those that give the product a "positive edge" (Werth & Forster, 2006, p. 37).

On the other hand, because prevention-focused message highlight concerns of security, safety, assurance, protection and responsibility, the prevention-focused message in this study encompasses a sense of vigilance to assure safety, avoid loss, secure an absence of unwanted occurrences, and maintain the status quo (Avnet & Higgins, 2006). The appeal in this advertisement is to be cautious, preparative and avoid mismatches to the desired end-state, while being concerned with losses versus non-losses. The prevention-focused advertisement

in this study explains the costs of failing to take action and shows how people can avoid harmful things from taking place by consuming the advertised product

Figure 1: Examples of promotion and prevention-framed messages and advertisements

Aaker and Lee (2001)

Promotion frame

Further, preliminary medical research suggests that drinking purple grape juice may contribute to the creation of greater energy! Growing evidence suggests that diets rich in Vitamin C and iron lead to higher energy levels. According to research by the United States Department of Agriculture, Welch's Purple 100% Grape Juice has more than three times the naturally-occurring Vitamin C and iron than other juices. Our Concord grapes and Niagara grapes are harvested only at the peak of flavor so that Welch's Grape Juice is great tasting as well as energizing. Plus, it is simply fun to drink!

Prevention frame

Further, preliminary medical research suggests that drinking purple grape juice may contribute to healthy cardiovascular function. Growing evidence suggests that diets rich in antioxidants may reduce the risk of some cancers and heart disease. According to research by the United States Department of Agriculture, Welch's Purple 100% Grape

Juice has more than three times the naturally-occurring antioxidant capacity of other juices. Purple grape juice's antioxidants are commonly attributed to the flavonoids contained in the juice that help keep arteries clear so that blood can flow freely. Therefore, it is healthy to drink!

Keller (2006)

Prevention frame

By taking part in the South Beach Diet you will be a part of the only weight loss program that is clinically proven to reduce your chances of heart disease

Unlike many low carbohydrate diets, like Atkins, South Beach provides a balanced diet that is not high in unhealthy fats, which can otherwise raise your cholesterol level

Compared to the Atkins diet, lose weight on this diet while you decrease your chances of high blood pressure and unhealthy aging

Promotion frame

Even if you're not a cook, you can create delicious entrees. We provide hundreds of easy to understand recipes that can be modified to fit your taste

Compared to Atkins, our plan is flexible enough that if you find you have overindulged or gained some weight, you can simply return to phase one or two until you've reached your goal

It is easy to follow—unlike Atkins, there is no need to cut out all carbohydrates like fruit and bread!



## CHAPTER III

### STUDY 1

A single between-subjects factor (promotion vs. prevention framed advertisement) design was implemented. Participants read an advertisement for a sugar-free chocolate that was either gain-framed (promotion focused) or loss-framed (prevention focused). Participants also tasted the sugar-free chocolate mentioned in the advertisement and then evaluated both the chocolate and the advertisement.

It is predicted that:

H1. In the promotion framed condition, as promotion scores increase, enjoyment of taste, value of the product and fluency of the advertisement will all increase. When substituting promotion scores with approach orientation scores similar outcomes are expected. In this condition, this relationship will not hold true for avoidance orientation scores.

H2. In the prevention framed condition, as prevention scores increase, enjoyment of taste, value of the product and fluency of the advertisement will all increase. Once again, when substituting prevention scores with avoidance orientation scores similar outcomes are expected. In this condition, this relationship will not hold true for approach orientation scores.

H3. Additionally, it's expected that under conditions of fit (promotion advertisement and promotion focus/prevention advertisement and prevention focus) typical fit effects (enhanced recall, increased confidence in recall) will emerge.

### *Methods*

#### *Participants*

Fifty-two (33 female, 19 male) undergraduate students participated and were given an experimental credit for their introductory psychology course. Participants were English speaking and of diverse ethnicity (11 Black, 2 Asian, 34 White, 2 Hispanic, 3 Other). Participants signed up for the study titled "Foods and Attitudes" and each participant completed the experiment individually, with no more than three participants in the room at any one time.

#### *Materials*

*Regulatory Focus Measure.* The Regulatory Focus Questionnaire developed by Lockwood, Jordan and Kunda (2002) is made up of two independent subscales designed to measure promotion and prevention foci. The psychometric properties of these scales have been assessed and have been shown to meet conventional standards (Lockwood, Jordan & Kunda, 2002). The subscales have been found to be reliable (chronic promotion alpha = .78, chronic prevention alpha = .81). The items are rated on a 9-point scale: 1 – “Not at all true of me”, 9- “very true of me”. Example questions include: “My major goal in work right now is to avoid becoming an failure”, “I see myself as someone who is primarily striving to reach my ‘ideal self’—to fulfill my hopes, wishes, and aspirations”, “I see myself as someone who is primarily striving to become the self I “ought” to be—to fulfill my duties, responsibilities, and obligations”, “I often think about how I will achieve academic success”, and “I often

*imagine myself experiencing bad things that I fear might happen to me*". (See Appendix A for complete list of items.)

*BIS/BAS*. To measure individual differences in approach and avoidance orientation the *BIS/BAS* questionnaire developed by Carver and White (1994) was used (see Appendix B). The *BIS/BAS* scales have been shown to possess convergent and discriminant validity (Carver & White, 1994). Responses on the *BIS/BAS* questionnaire were collected using a four point scale, *1- strongly agree to 4 - strongly disagree*. The questionnaire is comprised of one *BIS* scale (7-items,  $\alpha = .81$ ) and three *BAS* subscales (13-items,  $\alpha = .81$ ). To obtain composite scores for each of these constructs, the respective items were reversed coded as necessary and summed. The *BIS* scale measures avoidance motivations and is designed to assess concerns, worries and sensitivity towards the possibility of negative events or outcomes (Jorm, Christensen, Henderson, Jacomb, Korten, & Rodgers, 1999). An example of an item from the *BIS* composite is, *"I worry about making mistakes."*

The *BAS* scale measures approach motivation and is divided into three scales that each assess different forms of approach motivation (reward responsiveness, fun seeking, and drive). The reward response scale includes items that focus on positive responses to the occurrence or anticipation of reward. The fun seeking scale includes items that represent a desire for new rewards and willingness to approach a potentially rewarding event on the spur of the moment. Lastly, the drive scale consists of items that are regarded to persistent pursuit of desired goals. The three *BAS* subscales have been found to reflect the same regulatory system (Heubeck, Wilkinson, & Cologon, 1998; Leone, Perugini, Bagozzi, Pierro, & Mannetti, 2001). Since there are no theoretical reasons to expect that congruence or fit effects will only emerge for one of these types of *BAS* indices, approach motivation was measured

by adding up scores from all three BAS subscales. General approach motivation has been calculated in this way in past research (Sherman, Mann, & Updegraff, 2005; Strachman & Gable, 2006).

*Advertisements.* Both advertisements created for this study had the exact same number of words and followed the same pattern. The content within each advertisement was as similar as possible to avoid potential confounds and to preserve systematic control between conditions so that the only difference between experimental conditions would be the framing of the message. The brand name used in the advertisement was also fictitious to eliminate the possibilities of any unwanted influences due to prior brand knowledge/preferences. Half of the participants were randomly selected into the promotion-focus condition and read an advertisement with gain-framed content. The message of this chocolate advertisement is promoting wholesomeness, maintaining health, stimulation and achievement.

*Promotion-focus advertisement*

<p>Treating yourself to chocolate is one of life's little pleasures. Now it's easy to enjoy chocolate and be guilt free! Carlamina's Sugar-Free Chocolates are lower in calories and may have considerable health benefits. Chocolates contain antioxidants that promote wholesome hearts and help maintain healthy blood pressure levels. Chocolates are also loaded with flavonoids that are nourishing for the heart and stimulate growth of cancer-fighting agents.</p> <p>In addition to the health advantages, Carlamina's Sugar-Free Chocolates taste great too! Carlamina's Chocolates are sweetened with Maltitol, a healthier sugar substitute, and taste tests show that Maltitol is indistinguishable from actual sugar. Maltitol has a low glycemic index, making it an ideal sugar alternative and the easiest to digest. Maltitol does not contain sugar alcohols so it does not promote tooth decay, which is perfect for kids. Achieve complete satisfaction of your chocolate craving with a decadent, Carlamina's Sugar-Free Chocolate!</p>
--

The other half of the participants were randomly selected into the prevention-focus condition and read an advertisement with loss-framed content. The overarching message of this chocolate advertisement was stressing prevention of high blood pressure, heart disease, cancer, and tooth erosion.

### *Prevention-focus advertisement*

Treating yourself to chocolate is one of life's little pleasures. Now you can enjoy chocolate without the guilt. Carlamina's Sugar-Free Chocolates are lower in calories and may help reduce health problems. Chocolates contain antioxidants that fight heart disease and inhibit high blood pressure. Chocolates contain flavonoids which are good for the heart and prevent some forms of cancer. In addition to helping evade poor health, Carlamina's Sugar-Free Chocolates taste great. Carlamina's Chocolates are sweetened with Maltitol, a healthier sugar substitute, and taste tests show that Maltitol is indistinguishable from actual sugar. Maltitol has a low glycemic index, making this chocolate suitable for kids and those concerned about carbohydrate intake. Maltitol is safer for teeth because it is resistant to the oral bacteria that lead to cavities and tooth erosion. It's possible to enjoy chocolate again without the negative consequences. Satisfy your craving with Carlamina's Sugar-Free Chocolates.

*Chocolate.* The chocolates were individually wrapped mini-bars made by *Fifty-50*. The company name or logo did not appear anywhere on the wrapper or the chocolate itself. These chocolates were representative of the chocolates described in the advertisements because they are made without added sugar, include the sugar substitute Maltitol, and are low glycemic. Complete information on the chocolates can be found at <http://www.fifty50.com>.

*Chocolate evaluation.* Participants were asked to rate the taste of the chocolate by answering the item: “*How much did you like the taste of this chocolate*”, using a 7 point scale ranging from, 1= “*Not much at all*” to 7= “*Extremely*”. Participants were also asked to respond to the items, “*I enjoyed the taste of this chocolate*”, and “*I prefer this chocolate to most*”, 1= “*Strongly disagree*” to 7 - “*Strongly agree*”. These items were combined to create a reliable index of taste ratings, ( $\alpha = .92$ ). Participants also indicated how much they felt the chocolate should cost, rated their willingness to recommend the chocolate, determined their purchase intent and explained their preference of this chocolate to other chocolates (refer to Appendix C to see exact statements and materials).

*Advertisement evaluation (fluency).* Questions asked about the advertisement were designed to explore the “it just feels right” experience. Participants were asked to rate if they thought the advertisement was straightforward, informative, read with ease, flowed smoothly and if it felt right. Example items include, “*the advertisement flowed smoothly*”, and “*the*

*style of the advertisement felt right*", 1 = "Strongly disagree" to 7 = "Strongly agree" (refer to Appendix C to see exact statements and materials). These items were combined to create a reliable index of perceptions of the advertisement, ( $\alpha = .75$ ).

*Recognition task.* Also, because regulatory focus has been found to influence memory, participants answered questions to examine how well they were able to remember the advertisement. Participants were asked to determine if they read the "exact statement" in the advertisement or if they "*did not read the exact statement*". Three statements from the promotion ad, three statements from the prevention ad, and three that are not from either ad but were related in content were included in this recognition task. Participants will also be asked to rate how confident they are in their answer (See Appendix D for exact questionnaire).

*Confidence task.* After deciding their answer for each of the recognition items, participants were asked to indicate much confidence that had that that response was correct. They were instructed to use a whole number from 0 % "*Not at all confident*" to 100 % "*Completely confident*". (Also see Appendix D).

*PANAS.* Mood was measured using the Positive and Negative Affect Schedule, PANAS, (Watson, Clark & Tellegen, 1988). The scale consists of 10 positive affective descriptors (e.g., "*interested*", "*excited*", "*enthusiastic*", "*inspired*", "*active*";  $\alpha = .70$ ) and 10 negative affective descriptors (e.g., "*distressed*", "*upset*", "*guilty*", "*irritable*", "*nervous*";  $\alpha = .73$ ). Participants are asked to rate how each of the adjectives corresponds to how they are feeling "right now" on a 1 to 5 Likert-type scale, 1 = "*Not at all*" and 5 = "*Extremely*" (See Appendix E).

### *Procedure*

On arrival, participants were informed that they would be participating in a study that involved the consumption of food, specifically the tasting of chocolate. All participants first completed a questionnaire of combined measures to determine their regulatory focus orientation and measure individual differences. These measures included: demographic questions, the Regulatory Focus Questionnaire (Lockwood, Jordan & Kunda, 2002) and the BIS/BAS Scales (Carver & White, 1994). Multiple measures of approach and avoidance motivation (BIS/BAS and Regulatory Focus) were used because they are conceptually related and have both been shown to lead to congruence effects. Because it is unknown if one set of measures is better than the other, both have been included.

After completing the first questionnaire, participants were told that they were taking part in a marketing research study designed to tap into ideas that examined how exposure to an advertisement, while testing the advertised product, impacted memory about the advertisement and the product. Participants were then exposed to one of the advertisements depending on which condition they were randomly assigned to. They were instructed to take as much time as necessary to read the advertisement and were told to read the advertisement with care because they would later be asked specific questions about the advertisement.

Once they felt comfortable enough with the advertisement they were then given a cup with three pieces of chocolate in it. Participants were told that the chocolate in the cups was the chocolate in the advertisement and were asked to reread the advertisement while eating the chocolate. They were told that they did not have to eat all of the chocolate in the cup but that they could if they wanted to. Participants were also once again reminded to read the advertisement carefully. When the participants had consumed all the chocolate they had

wished to eat and had completed rereading the advertisement, the experimenter removed the advertisement and handed out another packet of questionnaires. Participants were first asked to evaluate the chocolate, then to evaluate the advertisement, then to complete the recognition (and confidence) task, and then to complete an affect measure. Included in this set of questionnaires were a host of other exploratory items (see Appendix C). After completing these measures, participants were debriefed and excused.



## CHAPTER IV

### STUDY 1 RESULTS

First off, preliminary analyses showed no gender or demographic effects on any of the dependent variables. Therefore, these variables were not included in any of the discussed analyses. Fit is expected to occur when there is a match between motivational orientation and the framing of a message. Such fit effects have been found in studies measuring general avoidance and approach motivation, otherwise known as BIS/BAS respectively (Sherman, Mann & Updegraff, 2005), and others have found the same effects when measuring prevention and promotion (Keller, 2006). In the current study, general approach/avoidance motivation and promotion and prevention were measured. In Study 1 promotion and prevention scores assessed by the Regulatory Focus Measure did not relate to, or predict, any of the dependent measures and will not be discussed any further in relation to Study 1. However, avoidance and approach orientation assessed via the BIS/BAS scale did relate to dependent measures and were therefore used in the reported analyses.

To test the hypotheses, multiple regression analyses were computed. Consistent with the approach outlined in previous studies, all regression analyses involving approach and avoidance motivation included both BIS and BAS simultaneously as predictors (Stachman &

Gable, 2006). Since there are scores for each person on both BIS and BAS and because they are sometimes correlated, entering scores simultaneously as predictors in a regression analysis is one strategy to examine the unique effects of BIS or BAS.

*Taste.* An ANOVA was first computed to determine if there were any differences between the two advertisement conditions and how participants rated taste. Importantly, no main effect was found  $F(1, 49) = 1.676, p = .202$ , therefore the framing of the advertisement itself had no impact on how one rated the taste of the chocolate. To examine the first hypothesis, analyses were conducted to see if congruence between motivational orientation and message framing increased perceptions of taste.

One way to test for fit is to look at each experimental condition separately. A theory of congruence would predict that in the prevention-framed condition increases of BIS should relate to enjoyment of taste and in the promotion-framed condition increases of BAS should relate to enjoyment of taste. When selecting only participants who read the prevention-framed advertisement, multiple regression analyses show BIS scores positively predict ratings on the taste composite,  $F(2, 26) = 3.47, p = .047, R^2 = .22, \beta = .531, SE = .20, p = .015$ . To see if there was an interaction between BIS and condition, a multiple regression that includes the interaction term was conducted. This interaction term was significant  $F(3, 50) = 2.83, p = .049, R^2 = .15, \beta = 1.45, SE = .29, p = .03$ . For those who read the prevention-framed advertisement, BAS scores did not predict rating of taste (see Table I for complete results). When looking at participants who read the promotion-framed advertisement, multiple regression analyses show that there were no significant effects  $F(2, 26) = 1.61, p = .85, R^2 = .12$  (see Table II for complete results). In other words, neither BIS nor BAS scores related to taste when participants read a gain-framed advertisement.

Table I. Regression analysis results predicting taste (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.531	.202	.473	2.629	.015
BAS	-.035	.135	-.047	-.261	.796

Figure 2. Prevention-framed advertisement condition: BIS scores and taste

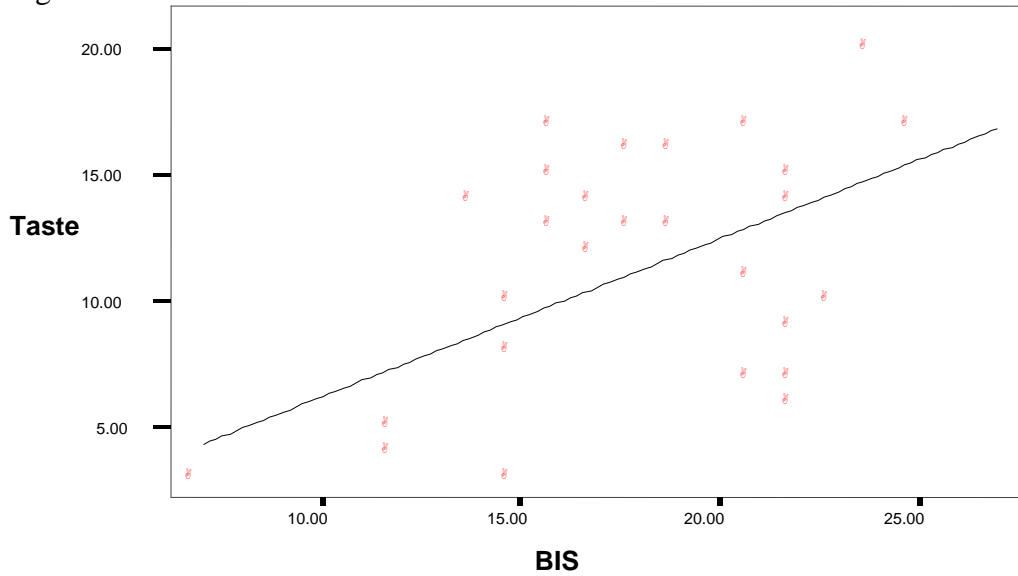
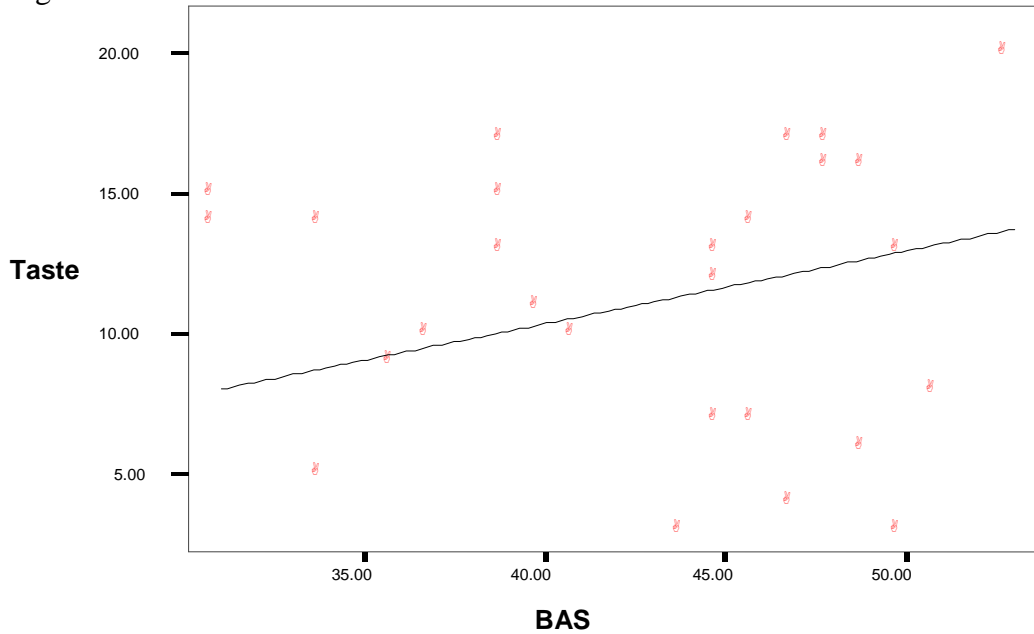


Table II. Regression analysis results predicting taste (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	-.090	.209	-.094	-.430	.672
BAS	-.063	.197	-.077	-.322	.751

Figure 3. Prevention-framed advertisement condition: BAS scores and taste



*Ad fluency.* Previous studies have shown that regulatory fit has been related to the persuasiveness of a message (Cesario, Grant, & Higgins, 2004; Lee, & Aaker, 2004). Similarly, it was predicted in the current study that fit should increase perceived fluency of the advertisement (e.g., straightforward, informative) and that this should lead to more favorable attitudes. Among those in the prevention-framed advertisement condition, BIS positively predicted how fluent participants perceived the advertisement to be  $F(2, 26) = 5.61, p = .010, R^2 = .318, \beta = .674, SE = .213, p = .004$ , while BAS scores did not predict fluency (see Table III for complete results). To see if there was an interaction between BIS and condition, a multiple regression that includes the interaction term was conducted. This interaction term was marginally significant  $F(3, 50) = 4.49, p = .008, R^2 = .22, \beta = 1.21, SE = .28, p = .06$ .

Table III. Regression analysis results predicting ad fluency (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.674	.213	.534	3.167	.004
BAS	-.173	.143	-.204	-1.211	.238

A mediation analysis was computed to determine if ad fluency had a mediating effect on BIS and taste. A multiple regression analysis was used and followed the steps of Baron and Kenny (1986). These steps included: showing that the BIS is correlated with the perceptions of taste to establish that there is an effect that may be mediated; showing that the BIS is correlated with fluency; showing that the fluency affects the taste perceptions; and lastly, establishing that fluency completely mediates the relationship between BIS and perceptions of taste. When all four of these steps are met it is assumed that mediation is taking place. The mediation results for Study 1 showed a trend in the right direction; however, mediation was not evident because ad fluency was no longer significant when entered simultaneously into the multiple regression analysis,  $F(3, 23) = 3.362, p = .036, R^2 = .305, \beta = .306, SE = .135, p = .116$  (see Tables IV - VI for complete results). A regression analysis was performed for the promotion- framed condition to examine if BIS or BAS relate to ad fluency and no significant effects were found (see Table VII for complete results).

Table IV. Correlation Matrix (Prevention Condition)

	Ad Fluency	Taste	BAS	BIS	Positive Affect	Negative Affect	Promotion	Prevention
Ad Fluency	<b>.75</b>	.492**	-.183	.526*	.314	.390*	.405*	.273
Taste		<b>.92</b>	-.028	.471*	.514**	.274	.045	-.172
BAS			<b>.81</b>	.039	.169	.000	.300	-.152
BIS				<b>.81</b>	.511**	.252*	.298	.566**
Positive Affect					<b>.70</b>	.611**	.257	.270
Negative Affect						<b>.73</b>	-.013	.133
Promotion							<b>.78</b>	.297
Prevention								<b>.81</b>

Note: Reliability coefficients in bold along the diagonal. \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

Table V. Correlation Matrix (Promotion Condition)

	Ad Fluency	Taste	BAS	BIS	Positive Affect	Negative Affect	Promotion	Prevention
Ad Fluency	<b>.75</b>	.239	-.116	.247	.250	.319	-.013	.280
Taste		<b>.92</b>	-.081	-.101	.484**	.314	.292	.061
BAS			<b>.81</b>	.111	.316	.355	-.137	.078
BIS				<b>.81</b>	.605	.133	.522	.718
Positive Affect					<b>.70</b>	.872**	.142	.226
Negative Affect						<b>.73</b>	.507	.288
Promotion							<b>.78</b>	.296
Prevention								<b>.81</b>

Note: Reliability coefficients in bold along the diagonal. \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

Table VI. Regression analysis results testing for mediation (DV = taste composite scores; prevention condition).

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.325	.233	.289	1.397	.176
BAS	.017	.135	.023	.129	.898
Ad Fluency	.306	.188	.344	1.633	.116

Table VII. Regression analysis results predicting ad fluency (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.149	.192	.166	.773	.448
BAS	-.113	.181	-.134	-.622	.540

*Other predicted outcomes.* An ANOVA showed that there was no main effect between the two different advertisement conditions in responses to “the most one would pay for the chocolate,”  $F(1, 45) = 1.999, p = .164$ . This shows that the framing of the message itself does not affect the price one would pay for the chocolate. Multiple regression analyses were conducted to determine if fit would predict how much one would pay for the chocolate, how likely one would be to recommend the chocolate, how likely one would be to buy the chocolate, and how excited one would be to see the chocolate in the store. No results were significant ( $p$ 's > .05; see Tables XXV- XXXVI in Appendix F).

Although the multiple regression analyses using BIS and BAS as simultaneous predictors did not come out significant, some evidence for fit effects were found when applying alternative statistical strategies. In the prevention condition (but not promotion condition), bivariate correlations show that BIS is significantly related to how likely one is to buy the chocolate ( $r = .40, p = .047$ ). Consistent with the theory of fit, BAS scores did not relate to likelihood of buying the product in the prevention condition. Additionally, the relationship between BIS and how likely one would be to recommend the chocolate and how excited one would be to see the chocolate in the store showed bivariate correlations in the right direction, although not significant ( $p$ 's = .062 and .088, respectively). To test the hypothesis that congruence would influence fit effects such as memory and confidence,

multiple regression analyses were performed. These results were not significant ( $p$ 's > .05; see Tables also in Appendix F for complete results).

*Additional analyses.* It was also explored whether regulatory fit impacts how one feels.

Multiple regressions analysis showed that in the prevention advertisement condition, as BIS went up, positive affect went up also  $F(2, 24) = 4.75, p = .018, R^2 = .28, \beta = .585, SE = .200, p = .007$  (see Table VIII for complete results).

Previous studies have shown that enjoyment, which is a feeling state that might emerge from the experience of fit, has mediated fit effects in the past (Lieberman & Higgins 2002). Therefore a mediation analysis exploring positive affect as a mediator was conducted. The data do not support the notion that positive affect, which is perhaps related but different from enjoyment, mediates the relationship between BIS and taste because positive affect scores are no longer a significant predictor of taste when entered simultaneously into the multiple regression equation,  $F(3, 23) = 3.837, p = .023, R^2 = .334, \beta = .379, SE = .195, p = .064$  (see Table IX for complete results).

Table VIII. Regression analysis results predicting positive affect (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.585	.200	.505	2.921	.007
BAS	.116	.134	.149	.864	.396

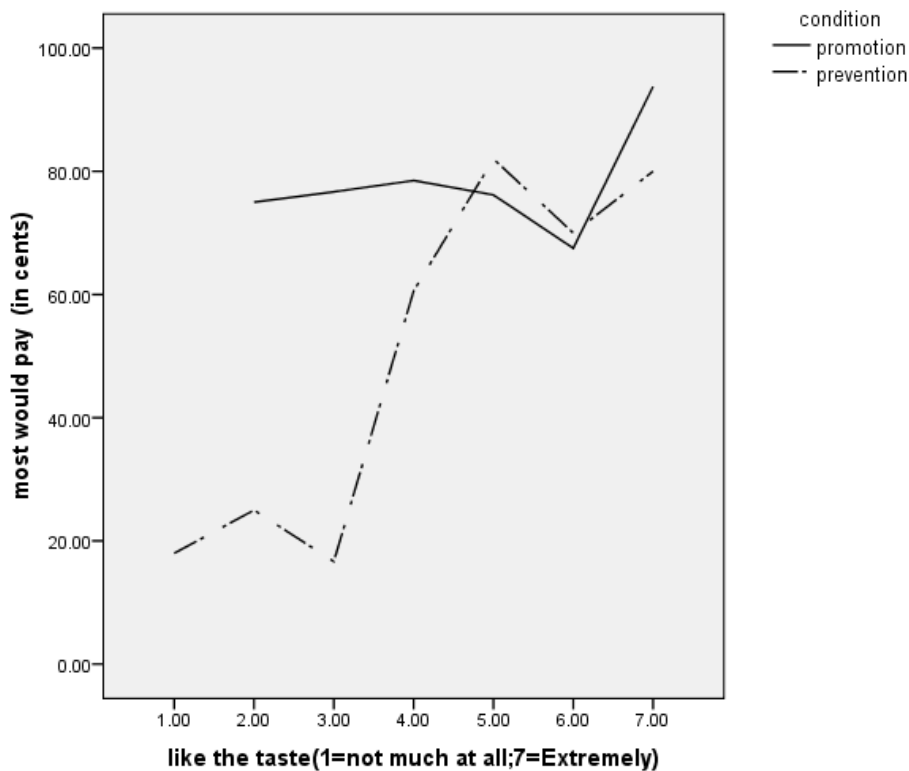


Table IX. Regression analysis results testing for mediation (DV = taste composite scores; prevention advertisement condition).

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.310	.223	.276	1.391	.178
BAS	-.079	.130	-.105	-.609	.548
Positive Affect	.379	.195	.391	1.942	.064

Lastly, correlational analyses were executed to explore if the framing of an advertisement and taste relates to how much one would pay. The results showed that in the prevention condition, as taste increased, the amount one would pay also increased ( $r = .715, p = .001$ ). There was no correlation in the promotion framed ad ( $r = .109, p = .613$ ). Figure 4 illustrates this relationship.

Figure 4: Relationship between taste and product value



## CHAPTER V

### STUDY 1 DISCUSSION

The results of Study 1 show some support for the theory of congruence/fit. The results resemble a fit effect because with the dependent variables of interest, there were no main effects for conditions. Instead significant effects were found only under conditions of congruence, more specifically, when there was a match between participants' avoidance orientation and the avoidance-framing of the ad (prevention-framed condition). In the prevention advertisement condition, as avoidance (e.g. BIS) increased, enjoyment of taste also increased. This pattern did not hold true in the promotion condition, once again supporting a fit effect. This is important because it is showing that factors other than ingredients can influence perceptions of taste.

Similarly, as BIS scores increased in the prevention condition, perceived fluency of the advertisement also increased. In the promotion condition, increased BIS scores did not relate to increased advertisement fluency, again supporting the notion of fit. These results support the hypothesis that congruence can positively impact fluency or the evaluations of messages. This result is notable because positive evaluations of an advertisement may lead to positive associations with the product mentioned in the advertisement. For example, in the current

study, as fit/congruence increased, participants found the advertisement to be more informative and straightforward. These fluency evaluations may lead to a “feeling right” experience that will likely transfer to favorable evaluations of the product being considered (Lee & Aaker, 2004).

A very noteworthy finding was that fit related to positive affect. This suggests that participants enjoyed the candy, they felt better and the overall experience was more positive. Positive affect is generally associated with activation of the approach motivation system (Watson, Wiese, Vaidya, & Tellegen, 1999), and therefore this finding is interesting because it is suggesting that fit can produce an instance where BIS relates to positive affect. This may be useful information in terms of consumer behavior research, because when you can increase positive affect, people may be more likely to attribute and associate that positive feeling to the product.

Another appealing finding was that in the prevention condition, as enjoyment of taste increased, the amount people would pay also increased. As expected this result implies that if one is reading a prevention-framed advertisement for something that does not taste good, then they will not spend a lot of money on the product. But interestingly, there was no correlation between enjoyment of taste and product value in the promotion framed advertisement. So from a marketing standpoint, if the product being marketed is something that does not taste good (e.g. health foods or medications), the result here suggests that it may be more lucrative to advertise it in a promotion-framed manner. It is possible that people would be more likely to spend more money on the product because in these gain-framed conditions (compared to loss-framed conditions) taste does not relate to how much one would pay. It may be worthwhile to further investigate this finding. Future research could

examine the validity and strength of this claim, and assuming this relationship or pattern holds true, the results may be very valuable.

As a test of the proposed mechanism, Study 1 intended to include the components necessary for a test of mediation (e.g., ad fluency as a representation for fit). Ad fluency was not found to have a mediating effect on BIS and taste perceptions in Study 1. While ad fluency is a reasonable mediator, perhaps it is not the most suitable representation of fit because fit is conceptualized as a feeling (Camacho, Higgins & Luger, 2003), while ad fluency is an evaluation of message content and style. Therefore, the lack of mediation in this study does not necessarily refute the fit/congruence explanation for the results that were found, particularly since effects were found only under conditions of fit/congruence. Additionally, positive affect also did not have a mediating effect on BIS and taste perception. However, the  $\beta$  for the mediator was close to being significant in the multiple regression analysis ( $p = .064$ ) and it is possible that with more power, mediation would be found.

Admittedly, it was surprising that fit effects were only found in the prevention-framed ad condition. As the hypotheses suggest, these results should have also been found in the condition of the promotion-framed ad as BAS increased. It was also surprising that common fit effects like how much one would pay for the chocolate, likelihood of recommending the chocolate, likelihood to buy the chocolate, excitement to see the chocolate, ability to recall the advertisement and confidence in recall ability did not emerge in multiple regression analyses. A follow-up study has been designed and conducted to again test for these expected results.

In addition to trying to replicate Study 1, the second study will also explore whether social contexts have an accentuating impact on regulatory fit effects. Although group contexts have

not yet been studied in conjunction with regulatory fit, previous research on group process has shown social or group interactions often enhance psychological effects (Hinsz, Tindale, & Vollrath, 1997). Group phenomena such as social validation, group polarization, emotional contagion and social facilitation are further discussed to support the relevance of this accentuation concept to the domain of fit and consumer evaluations.

## CHAPTER VI

### STUDY 2

There is a great value in determining if consumer behavior effects are exaggerated when people consider products together rather than alone. Even with the increased popularity in internet shopping, many consumer decisions are made in social environments. As well, family members jointly determine purchases for a wide range of products, and purchases by individuals are often influenced by social references (Davis, 1976; Grewal, Mehta, & Kardes, 2004). Differences that could occur when a person is shopping with friends rather than when shopping alone, or the impact a television commercial could have when it is being viewed with others instead of alone, could have major implications on the way advertisers market products. These effects could also impact focus group research and even change interaction between service employees and customers.

Humans are naturally social creatures and within all of us is a desire to belong and be accepted. Interaction and membership satisfy people's need of belonging (Baumeister & Leary, 1995) and help people to fulfill personal and shared goals (Forsyth, 1999). People value this need and because of this, go to extreme lengths to be socially accepted by others. The importance we put on belonging and acceptance is what makes it so easy for us to

change our perceptions, attitudes, and behaviors in ways that are consistent with those we seek approval from. We observe what others are doing as a way of validating our own actions. Often we do not even realize that we are doing it, but we frequently use the behavior and ideas of others' to decide what is appropriate, and use this information to guide the choices and decisions we make (Mortensen, 2004).

Numerous studies show that people rely on others as sources of information when interpreting situations (e.g., pluralistic ignorance; Darley & Latane, 1968), and when making judgments. The influence of others can shape a person's outward behaviors and not their private attitudes/beliefs (e.g., conformity), but others can influence private attitudes/beliefs as well (e.g., persuasion). For example, if one endorses the heuristic "consensus equals correctness", then the more others agree with a persuasive message the more the target person is likely to genuinely accept the message as well. As the heuristic implies, as others validate an opinion or attitude, the more correct the opinion is presumed to be. These ideas which relate to social validation are quite often implemented in marketing and advertising. The "best-sellers" aisle in a book store, the "most popular items" tab on a webpage, the "billions and billions served" on the McDonald's sign are all common tactics used to infer the social validity of the product to the consumer.

In relation to ideas of social validation, group polarization is another concept that would predict accentuation of fit effects in group situations. An extreme shift in attitudes and perceptions due to social influence is a type of group polarization. According to Mackie (1986), group polarization is the adoption of attitudes that are more extreme than, but in the same direction as, the groups' initial opinion. Individual group members will change their perceptions and opinions based on information that is revealed in group discussion (Hogarth

& Einhorn 1992). The opinions will polarize, or shift, as individuals try to agree with or conform to group norms.

Emotional contagion is another potentially relevant factor in the consumer evaluation process. Emotional contagion is the inclination to express and feel emotions that are similar to and influenced by those of others around us. Barsade (2002) described emotional contagion as a process in which a person or persons influences the emotions of another through the conscious or unconscious induction of emotion states and behavioral attitudes. Contagion is enhanced through the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person. In essence, these behaviors allow people to converge emotionally (Hatfield, Cacioppo, & Rapson, 1994).

Ramanathan and McGill (2007) have suggested that consuming with others is different from consuming alone because of these contagion effects. They found that evaluations of an experience may change as a consequence of being with someone else. Specifically, feelings of connectedness or synchrony while sharing an experience with another person can enhance people's enjoyment of that experience. They found that sharing an experience with another person may cause the consumer's moment to moment evaluation of that experience to become more like that of the other person, through emotional contagion.

Additionally, Tanner, Ferraro, Chartrand, Bettman and van Barren (2008) have suggested that both consumption and preferences can be influenced by behavioral mimicry, which is a component of contagion. They found that when people observe the consumption behaviors of others, individual preferences and consumption can be influenced by automatic mimicry of the observed consumption behaviors. Additionally, they found that those that had been



behaviorally mimicked later presented more positive attitudes towards a sports drink that had been discussed during the mimicking interaction. Moreover, when the mimicking facilitator was perceived as a sales person who was openly invested in the success of a product, the people who were mimicked were more likely to help the salesperson out.

Social facilitation is another phenomenon that may accentuate fit effects in group contexts. Social facilitation is explained as the enhancement of one's dominant response due to the presence of others (Gaumer, & LaFief, 2005). Zajonc (1965), who helped originate this theory, suggested that the mere presence of others increases physiological arousal and is therefore attributed to the increase in frequency of dominant responses. In studies using an array of organisms, it was found that groups tended to work faster, complete tasks quicker and consume more food compared to lone individuals (Zajonc, 1980). Sommer, Wynes and Brinkley (1992) found social facilitation effects in consumer behaviors. Specifically, they found that relative to lone individuals, group shoppers spent more time shopping per visit and made larger purchases.

Taking social influences into consideration, the fundamental premise of Study 2 is that group discussion, group interaction and the expressed opinions of others will enhance the fit effects outlined in Study 1 for individual group members.

Stated formally, it is hypothesized:

H1: The fit effects of Study 1, regarding perceptions of taste, fluency of an advertisement and positive affect should be replicated.

H2: The fit effects of Study 1, regarding perceptions of taste, fluency of an advertisement and positive affect, along with typical fit effects, should be accentuated in group settings. More

specifically what is expected is a main effect where participants in the group condition will rate the outcome variables higher than those in the individual condition.

## CHAPTER VII

### STUDY 2 METHODS

#### *Participants*

Study 2 was a 2 x 2 between-subjects design (promotion advertisement vs. prevention advertisement and individual vs. group condition) that explored differences among four different experimental conditions: group promotion focus, group prevention focus, individual promotion focus and individual prevention focus. The participants in Study 2 were different than the participants in Study 1. Ninety-eight (57 female, 41 male) undergraduate students participated and were given an experimental credit for their introductory psychology course. Participants were English speaking and of diverse ethnicity (22 Black, 4 Asian, 55 White, 5 Hispanic, 8 Other). Participants signed up for the study titled "Foods and Attitudes".

#### *Materials*

In addition to the Regulatory Focus Measure and the BIS/BAS Scale, the Regulatory Focus Scale (Fellner, Holler, Kirchler & Schabmann, 2007) was added. In accordance with regulatory focus theory, this measure is comprised of 10-items, 5 measuring promotion focus and 5 measuring prevention focus. This measure was originally created as an attempt to avert problems of social desirability bias by using forms of words that are as value-neutral as

possible. The psychometric properties of these scales have been assessed and have been shown to meet conventional standards (Fellner, Holler, Kirchler & Schabmann, 2007). Items are measured using a 7-point scale: “*definitely untrue of me*”, “*not true*”, “*probably not true*”, “*neither true nor untrue*”, “*probably true*”, “*true*”, “*definitely true*”. Example items include: “*I prefer to work without instructions from others*” and “*I like to do things in a new way*” (see Appendix G for complete list of items).

A manipulation check was also added to determine if the two advertisements were perceived as they were intended. This question asked participants to determine if the advertisement that they read emphasized avoiding negative consequences, insinuating prevention-framed, or if the advertisement emphasized benefits that could be gained, insinuating promotion-framed. Participants indicated this decision using a -5 to +5 scale, where -5 denoted that the ad “*extremely emphasized avoiding negative consequences*” and +5 denoted that the ad “*extremely emphasized benefits that could be gained*”. All other materials were the same as in Study 1.

### *Procedure*

Participants were assigned to the group or individual condition at random. All groups consisted of two participants. Group dyads were kept separate from participants in the individual condition. To prevent any confounds, participants were not aware that other conditions existed. Participants were also randomly assigned to read either the promotion focused advertisement or the prevention focused advertisement. The advertisements were the same as the ones used in Study 1.

The design and procedure was very similar to that of Study 1, with the exception of the addition of the group condition and few additional steps. Different from Study 1, after

reading the advertisement and tasting the chocolate, participants in the individual condition were instructed to write down anything that came to mind about the chocolate and/or the advertisement on a blank piece of paper. At this step in the group condition, participants were instructed to talk to each other about the chocolate and/ or the advertisement. Dyads sat in adjacent seats during discussion to facilitate a sense of “groupness”. The seats reduced physical distance and allowed for proper body orientation. Word, Zanna and Cooper (1974) suggest that when interacting with others, focusing one’s body towards that of another indicates an interest and openness to communicate with that person. Additionally, this close proximity was to ensure that participants could easily observe the behaviors of each other.

In both conditions, at this step (writing or discussion) the experimenter left the room to prevent participants from feeling as if they were being observed. This was to prevent them from feeling uncomfortable. After allowing time for writing or discussion participants were instructed to complete a final questionnaire individually. Group participants returned to their original seats, but remained seated across from the other participant.

## CHAPTER VIII

### STUDY 2 RESULTS

As in Study 1 initial analyses showed that there were no gender effects on any of the variables; therefore gender was not included in any of the analyses.

*Manipulation check.* A manipulation check was included to determine if participants had perceived the advertisements as they were intended to be. In the individual condition, those that read the promotion-framed advertisement reported that the advertisement emphasized benefits that could be gained, and this mean was significantly greater than the neutral point of the scale,  $\bar{X} = 2.85$ ,  $t(25) = 5.784$ ,  $p = .001$ . Unexpectedly, those that read the prevention-framed advertisement did not feel the ad placed an emphasis on avoiding negative consequences, but instead reported a mean that was no different from the neutral midpoint of the scale,  $\bar{X} = .96$ ,  $t(27) = 1.420$ ,  $p = .168$ . In the group condition, those that read the promotion-framed advertisement did not perceive an emphasis on gains,  $\bar{X} = 1.05$ ,  $t(21) = 1.458$ ,  $p = .160$ , while those that read the prevention-framed advertisement did  $\bar{X} = 2.30$ ,  $t(23) = 3.793$ ,  $p = .001$  (analyses in comparison to neutral midpoint of scale). Given the wording of the ads clearly included gain or loss statements, it's possible that the manipulation was effective but the manipulation check item was not. Additionally, since

some of the patterns of results are consistent with the theoretical predictions, conclusions should not necessarily be based from this one item manipulation check.

*Notes on individual difference measures.* In Study 2, general avoidance/ approach motivation was measured using the BIS/ BAS scales (alphas = .76, .77 respectively) and promotion and prevention was measured using the Regulatory Focus Measure (alphas = .85, .72 respectively) and the Regulatory Focus Scale (alphas=.60, .61 respectively). In the current study general avoidance/ approach motivation measured by BIS/BAS and promotion and prevention scores assessed by the Regulatory Focus Measure did not relate to, or predict, any of the dependent measures and will not be discussed any further. However, scores assessed using the Regulatory Focus Scale did relate to dependent measures and will be discussed further.

Following the procedure of Study 1, multiple regression analyses were conducted to test the hypotheses. Since there are scores for each person on promotion and prevention, scores were entered simultaneously as predictors to examine the unique effects of promotion or prevention.

*Taste.* An ANOVA showed that there was no main effect found between the two advertisement conditions and participants ratings of taste  $F(1, 96) = .008, p = .927$ . Thus the framing of the advertisement had no impact on how the taste of the chocolate was rated. To examine if congruence between motivational orientation and message framing could again increase perceptions of taste, multiple regression analyses were conducted. When selecting only participants who read the prevention-framed advertisement, multiple regression analyses show Prevention scores positively predict ratings of taste  $F(2, 50) = 3.78, p = .030, R^2 = .136, \beta = .440, SE = .160, p = .008$ . To see if there was an interaction between Prevention

scores and condition, a multiple regression that includes the interaction term was conducted. This interaction term was marginally significant  $F(3, 97) = 2.47, p = .07, R^2 = .07, \beta = -1.18, SE = 5.82, p = .06$ . Promotion scores did not predict ratings of taste for those that read the prevention-framed advertisement (see Table X for complete results). When looking at participants who read the promotion-framed advertisement, multiple regression analyses show that there were not significant effects  $F(2, 46) = .101, p = .904, R^2 = .005$  (see Table XI for complete results). As in Study 1, neither Prevention nor Promotion scores related to taste when participants read a promotion-framed advertisement.

Table X. Regression analysis results predicting taste (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.011	.177	.008	.060	.952
Prevention	.440	.160	.369	2.750	.008

Table XI. Regression analysis results predicting taste (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.072	.176	-.062	-.410	.684
Prevention	.018	.145	.019	.124	.902

*Ad fluency.* It was predicted that fit would increase perceived fluency of the advertisement. To test if ad fluency effects would replicate, regression analyses were conducted. An ad fluency composite was created ( $\alpha = .83$ ). Unlike Study 1, neither Prevention nor Promotion scores related to ad fluency in either condition (see Tables XII and XIII). However, bivariate correlations did show that ad fluency is positively correlated to how likely one would be to buy the chocolate, how likely one would recommend the chocolate



and how excited they would be to see the chocolate in the store (see Table XIV for complete correlations results).

Table XII. Regression analysis results predicting ad fluency (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.136	.225	-.086	-.607	.547
Prevention	.212	.203	.148	1.043	.302

Table XIII. Regression analysis results predicting ad fluency (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.202	.249	.123	.811	.422
Prevention	.050	.206	.036	.241	.811

Table XIV. Correlation Matrix Study 2

	Taste	Would Buy	Would Recommend	Would be excited	Positive Affect	Negative Affect	Ad Fluency	RFM Promo	RFM Prev	RFS Promo	RFS Prev.	BAS	BIS
Taste	<b>.90</b>	.860** .001	.763** .001	.699** .001	.279** .005	-.104 .308	.401** .004	-.070 .494	-.013 .900	-.035 .733	.190 .061	.047 .649	.185 .068
Would Buy		<b>1.000</b>	.854** .001	.787** .001	.284** .005	-.076 .460	.449** .001	-.049 .635	-.023 .821	-.057 .575	.248* .014	.004 .967	.140 .170
Would Recommend			<b>1.000</b>	.712** .000	.294** .003	-.152 .135	.460** .001	.037 .715	-.039 .705	-.026 .799	.257* .011	-.104 .309	.110 .279
Would Be Excited				<b>1.000</b>	.322** .001	-.040 .698	.407** .001	.082 .422	.023 .820	-.014 .888	.204* .044	-.045 .662	.121 .234
Positive Affect					<b>.89</b>	.190 .061	.150 .295	.150 .140	.128 .208	.281** .005	.111 .276	.139 .171	-.243** .021
Negative Affect						<b>.84</b>	-.084 .558	-.132 .194	.167 .100	.037 .715	-.025 .803	.114 .265	.002 .982
Ad Fluency							<b>.83</b>	.050 .726	-.011 .940	-.092 .521	.152 .288	.110 .442	.042 .769
RFM Promo.								<b>.85</b>	.064 .530	.101 .325	.286** .004	.251* .013	-.130 .202
RFM Prev.									<b>.74</b>	.286** .004	.244* .015	.078 .448	.414** .001
RFS Promo.										<b>.60</b>	-.095 .351	.385** .000	-.101 .324
RFS Prev.											<b>.61</b>	.063 .537	.392** .001
BAS												<b>.77</b>	.013 .896
BIS													<b>.76</b>

Note: Reliability coefficients in bold along the diagonal. \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

*Positive affect.* Analogous to Study 1 it was explored whether regulatory fit impacts how one feels. Multiple regressions analysis showed replication in that, in the prevention-framed advertisement condition as Prevention scores increased, positive affect also increased  $F(2, 50) = 5.10, p = .010, R^2 = .175, \beta = .593, SE = .287, p = .044$  (see Table XV for complete results). Additionally a mediation analysis exploring positive affect as a mediator was conducted. In the current study the mediation results showed that mediation was present because positive affect remained significant when entered simultaneously into the multiple regression equation. Therefore, positive affect had a mediation effect on the relationship between Prevention and taste  $F(3, 50) = 6.837, p = .023, R^2 = .334, \beta = .379, SE = .195, p = .001$  (see Table XVI for complete results).

Table XV. Regression analysis results predicting positive affect (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.798	.318	.329	2.510	.016
Prevention	.593	.287	.271	2.064	.044

Table XVI. Regression analysis results predicting mediation positive affect (DV = Taste; Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.182	.171	-.138	-1.064	.293
Prevention	.296	.152	.249	1.951	.057
Positive Affect	.242	.073	.444	3.305	.002

*Additional outcomes.* Regression analyses were completed to see if fit would predict how much one would pay for the chocolate, how likely one would be to recommend the chocolate, how likely one would be to buy the chocolate, and how excited one would be to see the chocolate in the store. There were no significant effects for how much one would pay for the chocolate (see Tables XVII and XVIII for results). Multiple regression analysis in the current study found that in the prevention-framed advertisement condition, Prevention scores increased how likely one would be to recommend the chocolate  $F(2, 50) = 3.127, p = .053, R^2 = .115, \beta = .440, SE = .059, p = .020$ , how likely one would be to buy the chocolate  $F(2, 50) = 5.638, p = .006, R^2 = .190, \beta = .218, SE = .066, p = .002$  and how excited one would be to see the chocolate in the store  $F(2, 50) = 3.120, p = .053, R^2 = .115, \beta = .146, SE = .060, p = .018$ . Promotion did not influence any of these factors. Also, in the promotion-framed advertisement condition neither Promotion nor Prevention scores predicted any of these factors. (See Tables XIX- XXIV for complete results).

Table XVII. Regression analysis results predicting how much one would pay for the chocolate (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.057	.064	-.127	-.887	.379
Prevention	.001	.058	.002	.014	.989

Table XVIII. Regression analysis results predicting how much one would pay for the chocolate (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.079	.059	-.201	-1.350	.184
Prevention	-.018	.048	-.057	-.381	.705

Table XIX. Regression analysis results predicting if one would recommend the chocolate. (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.036	.065	-.075	-.554	.582
Prevention	.142	.059	.328	2.416	.020

Table XX. Regression analysis results predicting if one would recommend the chocolate. (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.026	.062	.063	.426	.672
Prevention	.069	.051	.200	1.342	.187

Table XXI. Regression analysis results predicting if one would buy the chocolate (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.032	.073	-.058	-.189	.658
Prevention	.218	.066	.430	3.309	.002

Table XXII. Regression analysis results predicting if one would buy the chocolate (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.014	.074	-.029	-.189	.851
Prevention	.030	.061	.076	.385	.620

Table XXIII. Regression analysis results predicting how excited one would be to see the chocolate in the store (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.028	.066	-.429	-.429	.670
Prevention	.146	.060	.332	2.443	.018

Table XXIV. Regression analysis results predicting how excited one would be to see the chocolate in the store (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.023	.061	.057	.373	.711
Prevention	.029	.050	.088	.581	.564

*Group effects.* The primary prediction for Study 2 was that group effects would accentuate fit effects. Multiple regression analyses were completed to test this hypothesis. When selecting participants that were in the group condition and read a promotion-focused advertisement, neither Prevention scores nor Promotion scores related to ratings of taste, ad fluency, or the other typical fit effects hypothesized. Also, when selecting participants who were in the group condition and who read a prevention-focused advertisement, neither Prevention nor Promotion scores predicted taste ratings, perceptions of ad fluency or other predicted fit effects. (See Tables XXXVII-LXIV in Appendix H for complete results). Since these fit effects were not significant as predicted in the hypothesis, explorative analyses were conducted to determine what could be preventing an accentuation effect. An ANOVA was performed and found that group participants reported having more negative affect than participants that worked alone, but this result did not quite reach significance by conventional standards,  $F(1, 96) = 3.532, p = .063$ .

## CHAPTER IX

### STUDY 2 DISCUSSION

The results of Study 2 added some further support for the theory of congruence/fit. Like Study 1, the results of the current study showed interesting outcomes under situations of congruence when there was a match between Prevention scores and the prevention-framed condition. There were no main effects resulting from the advertisements themselves; therefore differences could not have been produced from the message frame alone, adding further supporting this notion of fit.

In the prevention- framed advertisement condition, as Prevention scores increased, enjoyment of taste also increased. In the prevention-framed condition, Promotion scores did not increase enjoyment of taste, therefore showing support for a fit effect. The current study has replicated the findings of Study 1 showing that again, factors other than ingredients can influence perceptions of taste.

Likewise, as Prevention scores increased, in the prevention-framed condition, positive affect also increased. This result is a replication of findings from Study 1. Increased positive affect is expected to relate to Promotion scores and not to Prevention scores, and since this is an instance when prevention is predicting positive affect, it is most likely due to fit effects.

Furthermore, in the current study, positive affect mediated the relationship between Prevention scores and the taste of the chocolate in the prevention condition.

Another goal of the current study was to determine if fit could increase how much one would pay for the chocolate, how likely they would be to recommend and buy the chocolate and how excited one would be to see the chocolate in the store. Neither promotion nor prevention scores increased how much one would pay for the chocolate. However, it was found that in the prevention-framed advertisement condition, Prevention scores increased how likely one would be to recommend the chocolate, how likely one would be to buy the chocolate and how excited one would be to see the chocolate in the store. Since promotion scores did not increase likelihood of these factors in the prevention-framed condition, it is probable that congruence is driving these outcomes.

In addition to replicating findings of Study 1, the purpose of Study 2 was to examine if group effects would accentuate fit effects. The data did not support this expectation. What was found was that group members reported having more negative affect than lone individuals.

## CHAPTER X

### GENERAL DISCUSSION AND IMPLICATIONS

The main objective of these two studies was to examine if congruence/fit effects would heighten perceptions of taste. The results of these experiments show that in conditions where there are prevention-framed messages, higher avoidance orientation (BIS) or higher Prevention scores positively relates to enjoyment of taste. In a world where ingredients are thought to influence taste, this finding is very important because it identifies factors that contribute to perceptions of taste and may open up a new way to enhance the taste of food products that are important for people to eat (e.g. health food products). The results of these studies suggest that people who are avoidant oriented will enjoy these types of products if the advertisements are loss-framed rather than gain-framed. Given regulatory orientations can be situationally activated, an effective marketing strategy would be to prime consumers to be avoidant oriented and then present them with a loss-framed message.

Additionally, Study 1 found that in the prevention condition, as enjoyment of taste increased, the amount people would pay also increased. Although it is not shocking to expect if someone really likes the taste of something that they will spend more money on it, it is interesting to see that message framing can moderate this relationship (taste and value were



related in the prevention ad condition, but not in the promotion ad condition). This research suggests that if the advertisement for a product that won't taste very good is prevention-framed, it is likely that consumers will not spend a lot of money on the product. But since taste did not relate to the monetary value of the product in the promotion-frame condition, when marketing a product that by nature isn't likely to taste good or improve much in taste even after experiencing effects like fit (e.g. brussel sprouts or certain type of alcohol products), it may be more lucrative to advertise the product in a promotion-framed manner. This research implies that people would be willing to spend higher dollar amounts on bad tasting products with promotion-framed advertisements compared to prevention-framed ads. There is a call for more research to investigate this finding.

Another contribution of the current research is that, in two separate studies, it was found that fit relates to positive affect. What makes this finding significant is that in previous research, positive affect was only found to be related to approach motivation, but in these current studies fit has been related to BIS and prevention-focus. This being the case, this information may be very useful in consumer behavior research. The results here suggest that fit leads to a more positive overall experience or feeling. When there was fit between BIS and a prevention-framed advertisement, participants enjoyed the chocolate and felt better. This increase in positive affect may lead people to associate that positive feeling with the product and therefore lead to higher product evaluations and an increased motivation to seek out that product in the future. This type of transfer of feelings has been demonstrated in a number of domains such as romantic attraction (Berscheid & Walster, 1974).

There was some support that fit related to a measure of ad fluency in the prevention-framed conditions, particularly in Study 1. This finding is significant because ad fluency

helps keep a reader engaged because the ad is perceived to be more straightforward, easier to process and will presumably take less effort to grasp. In addition, if the ad is perceived to be more informative, as was found in the fit condition, persuasiveness of the message and trustworthiness of the source should increase.

In both studies there was evidence that congruence positively relates to one's willingness to buy a product, recommend a product and one's excitement to see the product in a store. These aspects are all major goals when marketing a product. The current research is now identifying congruence as a cost effective and easy way to address these marketing goals.

In addition to being a replication study, the second study sought out to determine if in the presence of others, fit effects could be accentuated through social validation processes. It was expected that fit effects would lead to a more positive overall experience, that this positive experience would transfer to product evaluations, and that validation and agreement during discussion would enhance fit-related outcomes. Study 2 did find that the presence of others affected product evaluations; however, product evaluations were inclined to be more negative. Instead of generating positive affect, groups seemed to create a more negative atmosphere and group participants reported higher negative affect than participants that worked alone. Although, this is not a common group effect, it is possible that this negativity may be due participant's attitudes concerning research participation. Since research participants are sometimes deceived and are left unaware of the true purpose of the study, participants may be guarded and relatively disengaged when interacting with other participants to avoid appearing susceptible to manipulation from the researchers. Therefore, it is possible that the anticipated effect of groups may be more likely to occur in non-experimental settings, which future research can explore.

As expected, in these studies, the BIS scale from the BIS/BAS measure was significantly correlated with the prevention scale from the Regulatory Focus Measure and Regulatory Focus Scale and BAS was significantly correlated with promotion scales. While it is surprising that results were not consistent among the various individual difference measures of orientation, the results do show that fit effects do occur. Future research is required to better understand why the inconsistency between measures and studies occurred. One thing that is apparent is that the measures are not perfectly reliable and potential research may need to be conducted to explore the limits of these scales.

It was unexpected that fit effects were only found in the prevention-framed advertisement condition. As the hypotheses suggest, these results should have also been found in the condition of the promotion-framed ad. However, it is possible fit did not occur in the promotion-framed condition because the advertisement may not have been as strong of a gain situation as intended.

To create a gain situation the advertisement identified a number of positive outcomes (e.g. healthy hearts and healthy blood pressure), but in retrospect these may not have been salient gains for the majority of the participants in the study because these are attributes most already possess. By consuming the product, participants wouldn't be gaining health benefits as much as maintaining their current levels of health. To better understand this, imagine a scenario where one person gives another person a \$10 bill. The receiving of the \$10 bill is essentially a gain, however, imagine now that the person who receives the \$10 already had \$1000. Although the \$10 bill is still adding to the \$1000, the gain may not be salient and may not be perceived as a strong incentive. This hypothetical situation may parallel what actually

happened in the study with the gain-framed advertisement and may explain why effects were not found under these conditions.

These two studies looked at individual differences in approach and avoidance motivation. Future research could explore if activating these constructs through priming would be an effective way to induce fit. This would be an important step because then fit could be applied to a wider audience and would not be restricted to targeting only people who are high in approach or avoidance motivation. As the ease and frequency of creating personalized advertisements and messages increases, the relevance of congruence/fit in marketing will increase as well.

In addition to effects of fit in consumer behavior, congruence/fit can be explored in other domains where receptivity and compliance is a concern. In the past fit has been applied as a strategy to get people to comply with health messages. It may be effective to explore fit in domains such as politics to get people to respond to specific political messages or ideas. Similarly, religious intuitions may be more successful at recruiting or getting people to accept messages by include principles of fit in sermons and communication. Furthermore, parents could find value in using the theory of fit in everyday child rearing, teachers could use fit as a way to promote compliance in the classroom, and psychologists and therapists could use the notion while trying to help clients progress.

## REFERENCES

- Aaker, J., & Lee, A. Y. (2001). 'I' seek pleasures and 'we' avoid pains: The role of self-regulatory goals in information processing and persuasion. *Journal of Consumer Research*, 28, 33-49.
- Avnet, T. & Higgins, E.T. (2006). How regulatory fit affects value in consumer choices and opinions. *Journal of Marketing Research*. 43, 1-10.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.
- Barsade S.G. (2002). The ripple effect: emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, 47, 644-675.
- Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*. 7, 157-215.
- Bem, D. J., Wallach, M. A., & Kogan, N. (1965). Group decision-making under risk of aversive consequences. *Journal of Personality and Social Psychology*, 1, 453–460.

- Bettman, J.R., and Sujan, M. (1987). Effects of framing on evaluation of comparable and noncomparable alternatives by expert and novice consumers. *Journal of Consumer Research*, 14, 141-154.
- Camacho, C. J., Higgins, E. T., & Luger, L. (2003). Moral value transfer from regulatory fit: What feels right is right and what feels wrong is wrong. *Journal of Personality & Social Psychology*, 84, 498-510.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Carver, C.S., & Scheier, M.F. (1990). Principles of self-regulation: Action and emotion. In E.T. Higgins & R.M. Sorrentino (Eds.), *Handbook of Motivation and Cognition: Foundations of Social Behavior*, 2, 3-52. New York: Guilford Press.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS scales. *Journal of Personality and Social Psychology*, 67, 319-333.
- Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer from "feeling right." *Journal of Personality and Social Psychology*, 86, 388 - 404.
- Chernov A. (2004). Goal orientation and consumer preference for the status quo. *Journal of Consumer Research*. 31,557–65.
- Crowe, E, & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes*, 69, 2, 117-132.
- Darley, J. M. & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, 8, 377-383.

- Davis, H.L. (1976). Decision making within the household. *Journal of Consumer Research*, 2, 241–260.
- Fellner, B., Holler, M., Kirchler, E. & Schabmann, A. (2007). Regulatory focus scale (RFS); Development of a scale to record dispositional regulatory focus. *Swiss Journal of Psychology*, 66, 2, 109-116.
- Forster, J., Grant, H., Idson, L. C., Higgins, E. T., (2001). Success/failure feedback, expectancies, and approach/avoidance motivation: How regulatory focus moderates classic relations. *Journal of Experimental Social Psychology*, 37, 3, 253-260.
- Forsyth, D. R. (1999). *Group dynamics* (3rd ed.). Pacific Grove, CA: Brooks/Cole
- Friedman, R. S. & Forster, J. (2001). The effect of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology*, 81, 1001–13.
- Gaumer, C. J., LaFief, W. C. (2005). Social facilitation: Affect and application in consumer buying situations. *Journal of Food Products Marketing*, 11, 75-82.
- Gray, J. A. (1987). *The psychology of fear and stress* (2nd ed.). Cambridge: Cambridge University Press.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion*, 4, 269–288.
- Grewal, R., Mehta, R., & Kardes, F.R. (2004). The timing of repeat purchases of consumer durable goods: The role of functional bases of consumer attitudes. *Journal of Marketing Research*, 41, 101–115.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion*. New York: Cambridge University Press.

- Heubeck, B. G., Wilkinson, R. B., & Cologon, J. (1998). A second look at Carver and White's (1994) BIS/BAS scales. *Personality and Individual Differences, 25*, 785-800.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319-340.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*, 1280-1300.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M.P. Zanna (Ed.), *Advances in Experimental Social Psychology*, 1-46. New York: Academic Press.
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist, 55*, 1217-1230.
- Higgins, E. T. (2002). How self-regulation creates distinct values: The case of promotion and prevention decision making. *Journal of Consumer Psychology, 12*, 177-191.
- Higgins, E. T. (2005). Value from regulatory fit. *Current Directions in Psychological Science, 14*, 209 - 213.
- Higgins, E. T., Idson, L. C., Freitas, A. L., Spiegel, S., Molden, D. C. (2003). Transfer of value from fit. *Journal of Personality and Social Psychology, 84*, 1140 - 1153.
- Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality & Social Psychology, 72*, 515-525.
- Hinsz, V. B., Tindale, R. S., & Vollrath, D. A. (1997). The emerging conception of groups as information processors. *Psychological Bulletin, 121*, 43-64.
- Hoegg, J. & Alba, J. (2007). Taste perception: More than meets the tongue. *Journal of Consumer Research, 33*, 490-498.



- Hogarth, R. M., & Einhorn, H.J. (1992). Order effects in belief updating: The belief adjustment model. *Cognitive Psychology* 24, 6, 1–55.
- Jorm, A. F., Christensen, H., Henderson, A. S., Jacomb, P. A., Korten, A. E., & Rodgers, B. (1999). Using the BIS/BAS scales to measure behavioral inhibition and behavioral activation: Factor structure, validity and norms in a large community sample. *Personality and Individual Differences*, 26, 49–58.
- Keller, P.A. (2006). Regulatory focus and efficacy of health messages. *Journal of Consumer Research*, 33, 109-114.
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86, 205-218.
- Leone, L., Perugini, M., Bagozzi, R. P., Pierro, A., & Mannetti, L. (2001). Construct validity and generalizability of the Carver–White behavioral inhibition system/behavioral activation system scales. *European Journal of Personality*, 15, 373–390.
- Liberman, N., Molden, D.C., Idson, L.C., & Higgins, E.T., (2001). Promotion and prevention focus on alternative hypotheses: Implications for attributional functions. *Journal of Personality and Social Psychology*, 80, 5–18.
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83, 4, 854–864.
- Mackie, D. M. (1986). Social identification effects in group polarization. *Journal of Personality and Social Psychology*, 50, 4, 720–728.

- Mackie, D.M. & Goethals, G.R., (1987). Individual and group goals. *Review of Personality and Social Psychology*, 8, 144-166.
- McCaul, K. D.; Johnson, R. J.; Rothman, A. J. (2002). The effects of framing and action instructions on whether older adults obtain flu shots. *Health Psychology*, 21, 6, 624-628.
- Moreland, R. L., (1987). The formation of small groups. *Review of Personality and Social Psychology*, 8, 80-110.
- Mortensen, K., (2004). *Maximum Influence*. New York: American Management Association.
- Paulssen, M. and R. P. Bagozzi. (2005). A self-regulatory model of consideration set formation. *Psychology & Marketing*, 22, 785-812.
- Ramanathan, S. & McGill, A.L. (2007). Consuming with others: Social influences on moment-to-moment and retrospective evaluations of an experience. *Journal of Consumer Research*, 34, 506-524.
- Rothman, A.J., Bartels, B.D., Walschin, J., Salovey, P. (2006). The strategic use of gain- and loss-framed messages to promote healthy behavior: How theory can inform practice. *Journal of Communication*, 56, 202-220.
- Rothman, A. J. & Salovey, P. (1997). Shaping perceptions to motivate healthy behavior. *Psychological Bulletin*, 121, 3-19.
- Rusting, C.L., & Larsen, R.J. (1998). Personality and cognitive processing of affective information. *Personality and Social Psychology Bulletin*, 24, 200-213.
- Shah, J. Y., Higgins, E. T., & Friedman, R. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*, 74, 285-293.

- Sherman, D.K., Mann, T. & Updegraff, J.A. (2005). Approach/avoidance motivation, message framing, and health behavior: Understanding the congruency effect. *Motivation and Emotion*, 1-5.
- Sommer, R., Wynes, M., & G. Brinkley (1992). Social facilitation effects in shopping behavior. *Environment and Behavior*, 24, 285 - 297.
- Spiegel, S., Grant-Pillow, H., & Higgins, E. T. (2004). How regulatory fit enhances motivational strength during goal pursuit. *European Journal of Social Psychology*, 34, 39-54.
- Strachman, A. & Gable, S.L. (2006). What you see (and do not want) affects what you see (and do not see): Avoidance social goals and social events. *Personality and Social Psychology Bulletin*, 32, 11, 1446-1458.
- Stroebe, W. & Stroebe, M.S. (1996). The social psychology of social support. In E. T. Higgins & A.W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles*. New York: The Guilford Press.
- Tanner, R.J., Ferraro, R., Chartrand, T.L., Bettman, J.R., & van Baaren, R. (2008). Of chameleons and consumption: The impact of mimicry on choice and preferences. *Journal of Consumer Research*, 34.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-70.
- Watson, D., Wiese, D., Vaidya, J., Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology* 76, 820–838.

- Wallach, M. A., Kogan, N., & Bem, D. J. (1962). Group influence on individual risk taking. *Journal of Abnormal and Social Psychology, 65*, 75–86.
- Werth, L. Forster, J. (2007). How regulatory focus influences consumer behavior. *European Journal of Social Psychology, 37*, 33-51.
- Word, C.O., Zanna, M.P., & Cooper, J. (1988). The nonverbal mediation of self fulfilling prophecies in interracial interaction. In E. Aronson (Ed.) *Readings About the Social Animal* (5th ed). New York: Freeman.
- Zajonc, R. (1965). Social facilitation. *Science, 149*, 269-274.
- Zajonc, R.B. (1980). Feeling and thinking. Preferences need no inferences. *American Psychologist, 35*, 151–175.
- Zander, A. (1985). *The Purposes of Groups and Organizations*. San Francisco: Jossey-Bass.
- Zhu, J. & Meyers-Levy, J. (2007). Exploring the cognitive mechanism that underlies regulatory focus effects. *Journal of Consumer Research, 34*.

## APPENDIX

## APPENDIX A

### (Regulatory Focus Measure Items)

I frequently imagine how I will achieve my hopes and aspirations.

In general, I am focused on preventing negative events in my life.

I typically focus on the success I hope to achieve in the future.

My major goal in school right now is to achieve my academic ambitions.

I often imagine myself experiencing good things that I hope will happen to me.

I often think about the person I am afraid I might become in the future.

I am more oriented toward preventing losses than I am toward achieving gains.

I often think about the person I would ideally like to be in the future.

I often think about how I will achieve academic success.

I often imagine myself experiencing bad things that I fear might happen to me.

I see myself as someone who is primarily striving to become the self I “ought” to be to fulfill my duties, responsibilities, and obligations.

I often worry that I will fail to accomplish my academic goals.

I frequently think about how I can prevent failures in my life.

My major goal in school right now is to avoid becoming an academic failure.

I am anxious that I will fall short of my responsibilities and obligations.

I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations.

In general, I am focused on achieving positive outcomes in my life.

Overall, I am more oriented toward achieving success than preventing failure.

APPENDIX B  
(BIS/BAS Scale Items)

When I'm doing well at something, I love to keep at it.

If I think something unpleasant is going to happen I usually get pretty "worked up".

I crave excitement and new sensations.

I worry about making mistakes.

It would excite me to win a contest.

If I see a chance to get something I want, I move on it right away.

I have very few fears compared to my friends.

When I get something I want, I feel excited and energized.

When I go after something I use a "no holds barred" approach.

When good things happen to me, it affects me strongly.

I feel worried when I think I have done something poorly.

When I see an opportunity for something I like, I get excited right away.

I feel pretty worried or upset when I think or know somebody is angry at me.

When I want something, I usually go all-out to get it.

I go out of my way to get things I want.

Even if something bad is about to happen to me, I rarely experience fear or nervousness.

I will often do things for no other reason than that they might be fun.

Criticism or scolding hurts me quite a bit.

I'm always willing to try something new if I think it will be fun.

I often act on the spur of the moment.

## APPENDIX C

### (Chocolate and Advertisement Evaluation Questionnaire Items)

How much did you like the taste of this chocolate?

What is *the most* you would pay for a standard bag (20 pieces) of this chocolate? (In cents)

How often do you eat chocolate?

The advertisement was straightforward.

The advertisement was worded awkwardly.

The style of the advertisement felt right.

The advertisement was informative.

The advertisement flowed smoothly.

I could tell this chocolate was sugar-free.

I enjoyed the taste of this chocolate.

I would recommend this chocolate to a friend.

I would buy this chocolate.

I was able to read the advertisement with ease.

I prefer this chocolate to most.

The advertisement was complex.

Maintaining a healthy diet is important to me.

I would be excited to see this chocolate in the store.



APPENDIX D

(Recall and Confidence Measures)

Please indicate whether you read this exact statement in the advertisement. If you believe the wording is different from what you read in any way, then you should answer “no” by placing a “2” in the blank provided. For the following questions please use the response options provided below:

Yes, I read  
this exact  
statement  
1

No, I did not  
read this exact  
statement  
2

Following your response, please indicate how much confidence you have that your response is correct. Use any whole number from 0% (not at all confident) to 100% (completely confident).

Although chocolate contains sugar, it has properties that work against sugar's tendency to produce the oral bacteria that eventually leads to dental decay. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Maltitol has a low glycemic index, making this chocolate suitable for kids and those concerned about carbohydrate intake. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Carlamina's Sugar- Free Chocolates are lower in calories and may have considerable health benefits. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Our chocolates also contain the neurotransmitter, serotonin, which acts as an anti-depressant. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Our chocolates contain antioxidants that fight heart disease and inhibit high blood pressure. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Our chocolates are also loaded with flavonoids that are nourishing for the heart and stimulate growth of cancer-fighting agents. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Antioxidants help the body's cells resist damage. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Now it's easy to enjoy chocolate and be guilt free! \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

Maltitol is safer for teeth because it is resistant to the oral bacteria that lead to cavities and tooth erosion. \_\_\_\_\_  
\_\_\_\_\_ % confident I am correct

APPENDIX E  
(PANAS Questionnaire)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way *right now*, that is, at the present moment.

1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely
_____	interested	_____	irritable	_____
_____	distressed	_____	alert	_____
_____	excited	_____	ashamed	_____
_____	upset	_____	inspired	_____
_____	strong	_____	nervous	_____
_____	guilty	_____	determined	_____
_____	scared	_____	attentive	_____
_____	hostile	_____	jittery	_____
_____	enthusiastic	_____	active	_____
_____	proud	_____	afraid	_____

APPENDIX F  
(Study 1 Results Tables)

Table XXV. Regression analysis results predicting how much one would pay for the chocolate (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	1.950	1.373	.278	1.420	.169
BAS	.149	.920	.032	.162	.873

Table XXVI. Regression analysis results predicting how much one would pay for the chocolate (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.273	1.488	.040	.184	.856
BAS	-.998	1.399	-.155	-.713	.483

Table XXVII. Regression analysis results predicting how likely one would be to recommend the chocolate (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.183	.094	.367	1.936	.065
BAS	-.029	.063	-.087	-.459	.650

Table XXVIII. Regression analysis results predicting how likely one would be to recommend the chocolate (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.001	.008	.002	.008	.994
BAS	-.040	.083	-.106	-.485	.633

Table XXIX. Regression analysis results predicting how likely one would be to buy the chocolate (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.203	.096	.397	2.117	.045
BAS	-.001	.064	-.003	-.014	.989

Table XXX. Regression analysis results predicting how likely one would be to buy the chocolate, (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	-.025	.082	-.066	-.306	.763
BAS	-.055	.077	-.153	-.709	.486

Table XXXI. Regression analysis results predicting how excited one would be to see the chocolate in the store (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.176	.101	.336	1.748	.093
BAS	-.011	.067	-.032	-.168	.868

Table XXXII. Regression analysis results predicting how excited one would be to see the chocolate in the store (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	-.007	.090	-.018	-.082	.935
BAS	-.010	.084	-.026	-.117	.908

Table XXXIII. Regression analysis results predicting recall (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	-.028	.053	-.108	-.532	.600
BAS	.018	.035	.103	.508	.616

Table XXXIV. Regression analysis results predicting recall (Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.005	.042	.023	.107	.916
BAS	.026	.040	.145	.667	.512

Table XXXV. Regression analysis results predicting confidence in recall (Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	-.577	.287	-.365	-2.010	.056
BAS	.305	.192	.288	1.587	.126

Table XXXVI. Regression analysis results predicting confidence in recall  
(Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
BIS	.631	.389	.335	1.624	.119
BAS	.078	.366	.044	.213	.834

APPENDIX G  
(Regulatory Focus Scale Items)

I prefer to work without instructions from others.

Rules and regulations are helpful and necessary for me.

For me, it is very important to carry out the obligations placed on me.

I am solving problems creatively.

I am not bothered about reviewing or checking things really closely.

I like doing things in a new way.

I am trying to make my work as accurate and error free as possible.

I like trying out lots of different things.

It is important to me that my achievements are recognized and valued by other people.

I am thinking about what other people expect of me.

APPENDIX H

(Study 2 Results Tables)

Table XXXVII. Regression analysis results predicting taste (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.001	.232	-.001	-.006	.995
Prevention	.272	.206	.266	1.324	.199

Table XXXVIII. Regression analysis results predicting taste (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.045	.335	.025	.135	.893
Prevention	.461	.214	.396	2.151	.041

Table XXXIX. Regression analysis results predicting taste (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.045	.264	-.040	-.171	.866
Prevention	-.196	.194	-.238	-1.008	.327



Table XL. Regression analysis results predicting taste (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.024	.197	-.026	-.121	.066
Prevention	.364	.270	.291	1.348	.193

Table XLI. Regression analysis results predicting ad fluency (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.716	.309	.435	2.322	.026
Prevention	.098	.274	.067	.356	.725

Table XLII. Regression analysis results predicting ad fluency (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.082	.330	-.048	-.249	.805
Prevention	.344	.211	.311	1.630	.116

Table XLIII. Regression analysis results predicting ad fluency (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.288	.411	-.168	-.702	.492
Prevention	-.085	.302	-.068	-.282	.781

Table XLIV. Regression analysis results predicting ad fluency (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.238	.327	-.163	-.728	.066
Prevention	-.183	.449	-.092	-.408	.687

Table XLV. Regression analysis results predicting how much one would pay for the chocolate (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.167	.087	-.371	-1.929	.066
Prevention	.039	.077	.096	.500	.622

Table XLVI. Regression analysis results predicting how much one would pay for the chocolate (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.028	.123	-.038	-.231	.819
Prevention	.272	.079	.570	3.455	.002

Table XLVII. Regression analysis results predicting how much one would pay for the chocolate (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.021	.080	.063	.265	.794
Prevention	-.047	.059	-.189	-.798	.435

Table XLVIII. Regression analysis results predicting how much one would pay for the chocolate (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.091	.060	-.323	-1.516	.145
Prevention	-.085	.082	-.220	1.177	.313

Table XLIX. Regression analysis results predicting how likely one would be to recommend the chocolate (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.042	.089	.097	.472	.641
Prevention	.065	.079	.169	.824	.419

Table L. Regression analysis results predicting how likely one would be to recommend the chocolate (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.109	.110	-.172	-.994	.330
Prevention	.201	.070	.493	2.855	.009

Table LI. Regression analysis results predicting how likely one would be to recommend the chocolate (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.062	.092	.158	.673	.509
Prevention	.071	.067	.248	1.059	.304

Table LII. Regression analysis results predicting how likely one would be to recommend the chocolate (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.019	.080	-.055	-.244	.810
Prevention	-.003	.110	-.006	-.029	.978

Table LIII. Regression analysis results predicting how likely one would be to buy the chocolate (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.055	.099	.113	.555	.584
Prevention	.082	.087	.192	.942	.356

Table LIV. Regression analysis results predicting how likely one would be to buy the chocolate (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.028	.123	-.038	-.231	.819
Prevention	.272	.079	.570	3.455	.002

Table LV. Regression analysis results predicting how likely one would be to buy the chocolate (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.024	.110	-.053	-.219	.829
Prevention	-.021	.081	-.064	-.264	.795

Table LVI. Regression analysis results predicting how likely one would be to buy the chocolate (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.063	.089	-.157	-.704	.489
Prevention	.061	.123	.111	.499	.623

Table LVII. Regression analysis results predicting how excited one would be to see the chocolate in the store (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.043	.082	.105	.520	.608
Prevention	.086	.073	.237	1.177	.251

Table LVIII. Regression analysis results predicting how excited one would be to see the chocolate in the store (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	-.147	.113	-.234	-1.306	.203
Prevention	.165	.072	.409	2.286	.031

Table LIX. Regression analysis results predicting how excited one would be to see the chocolate in the store (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.055	.089	.147	.613	.548
Prevention	-.017	.065	-.603	-.265	.794

Table LX. Regression analysis results predicting how excited one would be to see the chocolate in the store (Group condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.035	.085	.092	.41	.683
Prevention	.130	.117	.246	1.116	.278

Table LXI. Regression analysis results predicting positive affect (Individual condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.457	.351	.243	1.302	.206
Prevention	.633	.312	.379	2.031	.054

Table LXII. Regression analysis results predicting positive affect (Individual condition/ Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.663	.443	.268	1.498	.147
Prevention	.544	.283	.344	1.920	.066

Table LXIII. Regression analysis results predicting positive affect (Group condition/ Promotion condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.674	.526	.281	1.282	.216
Prevention	-.461	.387	-.262	-1.192	.249

Table LXIV. Regression analysis results predicting positive affect (Group condition/  
Prevention condition)

TERM	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i> <
Promotion	.904	.498	.378	1.814	.085
Prevention	.770	.685	.234	1.125	.274