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# Emotions as Accelerants and Retardants of Goal Pursuit

Anthony G. Salerno

*University of Miami*, [asalerno12687@gmail.com](mailto:asalerno12687@gmail.com)

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UNIVERSITY OF MIAMI

EMOTIONS AS ACCELERANTS AND RETARDANTS OF GOAL PURSUIT

By

Anthony G. Salerno

A DISSERTATION

Submitted to the Faculty  
of the University of Miami  
in partial fulfillment of the requirements for  
the degree of Doctor of Philosophy

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Anthony Salerno

Approved:

---

Juliano Laran, Ph.D.  
Professor of Marketing

---

Keri Kettle, Ph.D.  
Professor of Marketing

---

Claudia Townsend, Ph.D.  
Professor of Marketing

---

M. Brian Blake, Ph.D.  
Dean of the Graduate School

---

Chris Janiszewski, Ph.D.  
Professor of Marketing  
University of Florida

SALERNO, ANTHONY G.  
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This dissertation examines the interplay between different discrete emotions and goal states on motivated behavior. Previous research on emotion has typically focused on goal pursuit as a consequence of emotion. Similarly, research on goals has shown emotion to be a consequence of consumer's motivated behavior. The current research examines the concurrent influence of emotion and goal states on each other to then influence people's subsequent motivated behavior. Across three essays, this research examines how the pursuit of various hedonic and self-regulatory goals can be informed by different discrete emotions such as sadness, pride, and envy, to then influence people's goal-directed behaviors. The implications of this research are discussed from a theoretical and a consumer wellbeing perspective.

## TABLE OF CONTENTS

Chapter	Page
1 INTRODUCTION .....	1
An Overview of Goal Pursuit .....	3
Theories of Emotion and Motivation .....	4
Existing Research on the Goal/Emotion Interaction .....	6
2 HEDONIC EATING GOALS AND EMOTION: WHEN SADNESS DECREASES THE DESIRE TO INDULGE .....	9
Overview of Research Question .....	9
Functionalist Perspective .....	11
Study 1 .....	17
Study 2 .....	27
Study 3 .....	33
Study 4 .....	37
General Discussion .....	40
Tables .....	47
Figures .....	49
3 GOAL ACTIVATION MODERATES THE INFLUENCE OF PRIDE ON REGULATORY BEHAVIOR .....	54
Overview of Research Question .....	54
Self-Conscious Emotions .....	56
Pride and Self-Regulation .....	58
Study 1 .....	62
Study 2 .....	66
Study 3 .....	70
Study 4 .....	77
Study 5 .....	85
General Discussion .....	91
Figures .....	96
4 HOW ENVY INFLUENCES PURSUIT OF INDIVIDUALLY- VERSUS SOCIALLY-FRAMED GOALS .....	102
Overview of Research Question .....	102
The Multifaceted Nature of Envy .....	104
The Present Research .....	106
Study 1 .....	110
Study 2 .....	115
General Discussion .....	121
Tables .....	127

Figures .....	129
5 CONCLUDING REMARKS .....	131
REFERENCES.....	135

## CHAPTER 1: INTRODUCTION

As consumers live out their lives, there are a number of different, and many times conflicting, goals that one will possess, manage, and pursue. For instance, on any given day, a consumer can have the goals to be healthy, be social, have fun, be hardworking, and be responsible. How consumers manage the pursuit of these varied and often conflicting goals can be aided by information presented to them in the environment that can lead to changes in behavior (Bargh 1990; Bargh and Chartrand 2000). In much the same way as goals, consumers can also experience a wide range of emotional states throughout the course of the day. For instance, a consumer can go from being frustrated on their commute to work, to happy after their morning coffee, to anxious after seeing their to-do list, to prideful after making a dent in their to-do list, and even to sad after watching a tearjerker movie. Given that our emotions are also typically a product of our environment, can the emotions we experience serve as some type of informational signal to the goals we pursue?

While one might scoff at the question and say that emotions, obviously, can have an influence on our motivated behavior, the research looking at the relationship between the two factors is surprisingly limited (Frijda 1993). Thus, the primary aim of this dissertation is to begin an exploration that can help shed light on the numerous questions researchers have about the relationship between goals and emotions. What we know from research on goal pursuit is that the attainment of goals can lead to the experience of emotion (Carver and Scheier 1990; Higgins, Shah, and Friedman 1997; Soman and Cheema 2004), just as we know from research on emotion that its experience can initiate motivated behavior (Frijda 1987; Roseman, Wiest, and Swartz 1994). What we know less



about is 1) how an *actively* pursued goal can be influenced by specific emotional states (also called discrete emotions), 2) whether the type of influence depends on the current goal type and emotional state, and 3) the manner in which emotion influences the pursuit of goals. In this research, I propose that there are instances in which emotion can serve as an informational source to both the initiation and management of goal pursuit. My proposition is supported by research showing that all discrete emotions serve an evolutionary adaptive purpose in our lives (Keltner and Gross 1999), that one of the primary purposes of emotion itself is to induce behavior (Frijda 2005), and that emotion can be used as information for other cues in our environment (Schwarz and Clore 1983). Taken together, I am proposing that one of the most important adaptations of emotion is to influence goal-directed behavior, either by initiating behavior through the experience of the emotion itself or through the signaling of information in the presence and during the pursuit of other active goal states. In exploring these possibilities, an additional aim of this dissertation is to provide and to outline a path forward with respect to future research in the area.

This dissertation is comprised of three essays that each attempt to answer different parts of the research questions proposed above. This dissertation is organized as follows: I will start with an overview of research on goal pursuit, focusing particularly on environmental factors that influence consumer's management and pursuit of goal-directed behavior. I will then transition into a review of the emotions literature, showing how emotion is a determinant of goal-directed behavior. I will then move into a discussion of what research has been done that shows how emotion can influence the pursuit of goals, before identifying the currently existing gaps in the literature. Next, I

will outline how these gaps motivated the research questions contained in my dissertation as well as how I attempt to bridge these currently existing gaps together, before transitioning into my three essays. Chapter 2 shows that sadness, in the presence of a hedonic eating goal can lead to decreased indulgent consumption. Chapter 3 shows that pride, depending on the presence or absence of a self-regulatory goal, can either increase or decrease regulatory behavior. Chapter 4 shows that different facets of envy (i.e., benign and malicious envy) can enhance pursuit of various goals depending on whether the goal is framed as being individually or socially pursued. I end with concluding remarks on my research, summarizing the important points, discussing the implications of this work, and discussing its limitations in addition to other future directions.

### **AN OVERVIEW OF GOAL PURSUIT**

When one looks holistically at the wide range of consumer behavior phenomena observed, it is undeniable how much of it is goal driven (Baumgartner and Pieters 2008; Kopetz et al. 2012). Understanding how consumers pursue their goals becomes critical to understanding consumer behavior collectively. Goal-systems theory (Kruglanski et al. 2002) is an important theoretical framework that outlines how the motivated action of consumers can be explained around the concept of goal systems. Under this framework, goal systems are interrelated mental representations of numerous motivational networks which are each comprised of subsets of goals and means (Kruglanski 1996). Such a perspective views goal pursuit as a constellation of interconnected processes, and knowing whether a given focal goal will be pursued is dependent on many other environmental factors that may alter the accessibility of focal or competing goals, as well

as the availability of its means (Kopetz et al. 2012). This suggests that an important determinant of a consumer's goal-directed behavior is the types of environmental cues one is being exposed to at any given time.

Building on the previous point, other research has shown that the influence of environmental cues on one's goal-directed behavior may not be actively monitored on the part of the consumer (Bargh et al. 2001). For instance, environmental cues can initiate goal-directed behavior by the incidental exposure to information pertaining to focal versus competing goals (Laran and Janiszewski 2009), goal-related means (Geyskens et al. 2008), or even the behavior of others (Aarts, Gollwitzer, and Hassin 2004). An interesting consequence of these findings is that the relative level of goal activation, commitment, progress, and behavior is highly passive, variable, and subject to one's surroundings. From an evolutionary standpoint, it makes sense that goal management could occur at a nonconscious level; with so many moving pieces at work, it would be too computationally complex for consumers to actively manage at all times (Bargh 2006). An intriguing follow up question is whether emotion could act as another environmental cue that influences goal-directed behavior. In the next section, I transition into a discussion of relevant theories of emotion and their implications for consumer motivation.

## **THEORIES OF EMOTION AND MOTIVATION**

A number of theoretical perspectives have been developed to help researchers understand how emotion influences consumer motivation. One of the most influential

perspectives has been the mood-as-information framework (Schwarz 1990; Schwarz and Clore 1983). This perspective emphasizes that one's current subjective emotional experience can be used as information to influence evaluation, judgment, and, important to the current research, goal-directed behavior (Pham et al. 2001; Raghunathan and Pham 1999). Early research under the mood-as-information framework took a valence-based approach to researching emotion (i.e., general positive and negative mood states; Schwarz and Clore 1983). A fundamental assumption that grew out of this research was that an inbuilt cause-effect relationship exists that matches the valence of one's mood to their evaluation, recall, processing, and motivation. Using an example pertaining to motivation, the default expectation for someone currently experiencing a negatively-valenced emotion is to engage in emotion regulation in order to feel better (Gross 1998). One important limitation of assuming a "basic effect" is that it dismisses the influence of other contextual cues that might otherwise modify the typical motivational response.

A second perspective which relaxes the assumption of a basic effect for emotion on motivation is the mood-as-input framework (Martin and Davies 1998; Martin et al. 1993). This theoretical framework makes no assumptions as to what the default tendency will be from one's mood to their evaluation, processing, recall, or motivation. Instead, the effects of moods are assumed to be naturally different in different contexts. Continuing with the same example from above, a person who is in a negative mood but expects to elicit the help of others (different context) has been shown to maintain the negative mood as a means of increasing their efficacy at eliciting helping behavior out of others (Hackenbracht and Tamir 2010). The implication being that the typical or basic effect of emotion on motivation may depend on other environmental cues that make other types of

goals accessible. However, like the mood-as-information framework, the mood-as-input perspective also maintains a valence-based approach, when an even greater understanding could be gained by taking an emotion-specific approach to studying the effects of emotion on motivation.

A third perspective of how emotion influences consumer motivation is the functionalist perspective of emotion (Keltner and Gross 1999; Tooby and Cosmides 2008). This theoretical framework emphasizes the importance of how each discrete emotion has its own set of unique motivational properties that ultimately influence goal-directed behavior (Cosmides and Tooby 2000). A major strength of the functionalist perspective is that it integrates the strong points of the mood-as-information and mood-as-input frameworks, acknowledging the importance of emotion as an informational source and that an emotion's exact influence is subject to other environmental cues. An additional benefit to the functionalist perspective is that one of the theory's fundamental components is the assumption that every discrete emotion serves some adaptive purpose (Griskevicius et al. 2009, Griskevicius, Shiota, and Nowlis 2010). Given that the management and pursuit of goals is such an important aspect of consumer behavior, it could be that one adaptation of emotion is to aid goal pursuit. In the next section, I review previous research that has examined this possibility.

### **EXISTING RESEARCH ON THE GOAL/EMOTION INTERACTION**

More recent research has looked at the influence of emotion in the presence of active goals. However, the research has been limited both with respect to its scope and research methods, creating a need to create a greater sense of cohesion in identifying the

common elements amongst them. For instance, we know that the anticipation of goal attainment (failure) can cause associated positive (negative) emotion to transfer to the means and ultimately the pursuit of the active goal (Bagozzi, Baumgartner, and Pieters 1998; Fishbach, Shah, and Kurlanski 2004). What these findings do not show is how the *actual* experience of emotion in the presence of active goals might influence behavior differently. A similar issue is found with work by Aarts, Custers, and Holland (2007), which found that a semantic association exists between goals and negative affect such that the accessibility of active goals were inhibited in the presence of negatively-valenced words. Similar semantic association effects have been found for the specific emotions of guilt (Goldsmith, Cho, and Dhar 2012) and sadness (Zemack-Rugar, Bettman, and Fitzsimons 2007). Other research by Louro, Pieters, and Zeelenberg (2007) looked at actual emotional experience and showed that overall positive and negative emotion can either accelerate or impede the pursuit of an active goal depending on the perceived proximity to goal attainment. Other research has looked into the effects of discrete emotions on the pursuit of various active goals. Fishbach and Labroo (2007) found that the effect of happiness and sadness on goal-directed behavior depends on whether the active goal pertains to self-improvement or mood-management. Wilcox, Kramer, and Sen (2011) found that pride can license indulgent behavior in the presence of an active self-control goal by signaling accomplishment. Collectively, this research establishes that emotion can indeed influence the pursuit of goals.

What we do not have, however, is a clear taxonomy of what each specific emotion does to each specific goal one might possess. Research examining the link between emotion and cognition strongly suggests that researchers would benefit from moving

beyond a valence account towards an emotion-specific exploration of the goal/emotion relationship on goal pursuit (DeSteno et al. 2000; Griskevicius, Shiota, and Neufeld 2010). In addition to not fully understanding the instances in which specific emotions influence specific goals, we do not yet know *how* one influences the other. For instance, does a discrete emotion influence a given goal by altering the perceived instrumentality of the means? Does emotion influence the relative activation level of a given goal or even other countervailing goals? Is it possible that emotion could also influence the perceived progress of a given goal? These research questions represent the focus of my dissertation and are motivated by the previous findings in this area that provide hints, but no unanimous conclusion on how to bridge these different gaps in our understanding together.

By executing the research discussed in this dissertation, I am attempting to close the gaps on these different questions, seeing how all of these different components are related to one another, and providing an exciting avenue for future research. Chapter 2 looks at how emotion (sadness) can lead to perceptual changes in the perceived instrumentality of the means reflective of a goal. Chapter 3 examines how emotion (pride) can influence the relative activation and perceived progress of a goal to then influence motivated behavior. Chapter 4 theorizes that emotions (envy) can vary in their effect on goal pursuit depending on how the goal is framed. Collectively, my hope is that this dissertation provides a stepping stone for further research aimed at bridging these two interesting areas of research together.

## **CHAPTER 2: HEDONIC EATING GOALS AND EMOTION: WHEN SADNESS DECREASES THE DESIRE TO INDULGE**

### **OVERVIEW OF RESEARCH QUESTION**

A number of models explain how people pursue goals (goal systems theory, Kruglanski et al. 2002; regulatory focus theory, Higgins, Shah, and Friedman 1997; Test-Operate-Test-Exit, Miller, Galanter, and Pribram 1960; goal setting theory, Locke and Latham 1990). These models have been used to gain insight into factors that moderate goal pursuit, including goal accessibility (Kruglanski 1996; van Osselaer and Janiszewski 2012), inhibition (Fishbach, Friedman, and Kruglanski 2003), commitment/progress (Fishbach and Dhar 2005), regulatory fit (Crowe and Higgins 1997), and implementation intentions (Gollwitzer and Sheeran 2006). In general, these models assume that moderators of goal pursuit exert a consistent influence across all types of goals (e.g., increasing the accessibility of a goal should always increase the motivation to pursue the goal). That is, the influence of a moderator should not depend on the type of goal.

Research on the influence of emotions challenges the assumption that moderators of goal pursuit should exert a consistent influence across goals. The functionalist perspective of emotion proposes that the influence of an emotion on goal pursuit is a function of the type of goal being pursued. Functionalists argue that certain emotions are informative to the pursuit of certain goals (Campos et al. 2004; Witherington and Crichton 2007). For example, happiness facilitates the pursuit of a self-improvement goal but inhibits the pursuit of a mood management goal, whereas sadness facilitates the pursuit of a mood management goal but inhibits the pursuit of a self-improvement goal (Fishbach and Labroo 2007). Goal-emotion (dis)synergies exist because each emotion



consists of a different set of motivational subroutines (DeSteno, Valdesolo, and Bartlett 2006; Griskevicius, Shiota, and Neufeld 2010; Witherington and Crichton 2007). For example, happiness consists of subroutines that encourage (a) heuristic processing (Tiedens and Linton 2001), (b) an abstract construal (Labroo and Patrick 2009), and (c) an approach orientation (Labroo and Rucker 2009), whereas sadness consists of subroutines that promote (a) systematic processing (Tiedens and Linton 2001), (b) a concrete construal (Labroo and Patrick 2009), and (c) an avoidance orientation (Labroo and Rucker 2009). The implication is that happiness vs. sadness should influence goal pursuit based on whether the goal is simple vs. complex, flexible vs. rigid, and based on seeking opportunities vs. avoiding risks.

We document an additional influence of sadness on indulgent consumption, which depends on the activation of a hedonic eating goal. A hedonic eating goal typically results in indulgent consumption because a short-term focus on hedonic experiences takes precedence over long-term concerns like weight maintenance, disease prevention, and longevity (Tice and Bratslavsky 2000). Sadness can mitigate this influence of a hedonic eating goal because one function of sadness is to make a person more vigilant about preventing future losses (Lazarus 1991; Lench, Flores, and Bench 2011). Consequently, when a hedonic eating goal is active, an experience of sadness should increase a person's sensitivity to the potentially harmful consequences of indulgent consumption which, in turn, should decrease the desire to indulge. In contrast, when sadness is experienced in the absence of an active goal, these harmful consequences of indulgence are less apparent. As a result, sadness should function as a signal to regulate one's negative

emotions and result in increased consumption of indulgent foods as a means of feeling better (Andrade and Cohen 2007; Tice, Bratslavsky, and Baumeister 2001).

In the next section, we draw from the functionalist perspective to better understand how sadness can decrease or increase indulgent consumption. We begin our discussion with an overview of the functionalist perspective, so as to provide a foundation for understanding how emotions can serve as informational sources that can modify or initiate goal-directed behavior (Keltner and Gross 1999; Stein, Liwag, and Wade 1996). We then transition into a discussion of why sadness is uniquely suited to modify hedonic eating goals. We close with a discussion of how people should respond to sadness in the absence of active goals. Four studies test our hypotheses.

### **FUNTIONALIST PERSPECTIVE**

The functionalist perspective is a framework predicated on the assumption that emotions facilitate adaptive responses to the environment (Campos et al. 1994; Keltner and Gross 1999; Lazarus 1991). The perspective assumes that emotions are an evolutionary adaptation, and it is used to explain how emotions influence different classes of behavior. For example, evolutionary functionalists focus on how emotions are necessary for survival and reproduction (Cosmides and Tooby 2000; Griskevicius et al. 2010a; Tooby and Cosmides 1990). Social functionalists focus on how emotions help people engage in efficacious interpersonal, social, and cultural behaviors (Keltner, Haidt, and Shiota 2006). Communicative functionalists focus on how emotional expression alters the behavior of others (Saarni et al. 2006). Constructionists focus on how parental interaction and childhood socialization influence how emotions are experienced and

adapted in order to facilitate to goal pursuit (Thompson and Lagattuta 2006). The processes that facilitate these adaptive responses vary by class of behavior. Some research streams speak primarily to how emotions initiate goal pursuit (e.g., social functionalism), some to how emotions facilitate or inhibit goal pursuit (e.g., communicative functionalism), and some to how emotions modify goal pursuit (e.g., evolutionary functionalism, constructionism).

The functionalist framework allows for a specific emotion to exert a different type of influence on each type of goal (i.e., an emotion may facilitate the pursuit of goal A, but inhibit the pursuit of goal B). Functionalists account for this adaptability through their conceptualization of an emotion. Functionalists assume that each emotion consists of a set of neural programs (Tooby and Cosmides 1990). These neural programs can activate motivational subroutines that facilitate adaptive responses to the environment (DeSteno et al. 2006; Griskevicius, Shiota, and Nowlis 2010). The motivational subroutines are goal- and situation-specific (Tooby and Cosmides 1990). In effect, an emotion increases the accessibility of an array of neural programs, of which the subset that is applicable depends on the specific goal and/or context.

### **Emotion-Driven Goal Modification**

Functionalism conceptualizes goal pursuit as an interaction between a person and an environment. The fact that a person-environment interaction is ongoing, and environments are complex, implies that emotions can modify goal pursuit in multiple ways. First, emotions can be used as feedback during goal pursuit (Louro, Pieters, and Zeelenberg 2007). For example, successful (unsuccessful) goal pursuit can generate satisfaction (frustration) which, in turn, encourages (discourages) continued pursuit of the

goal (Ilies and Judge 2005). Second, emotions can be recruited as a means of modifying goal pursuit (Tooby and Cosmides 2008). For example, people can use memories or social interaction to build excitement (indifference) that then encourages (discourages) continued goal pursuit, even though the goal pursuit itself is not responsible for the excitement (indifference). Third, incidental emotion (i.e., emotion unrelated to the goal pursuit itself) can modify goal pursuit (Tooby and Cosmides 1990). For example, incidental pride can discourage the selection of thrifty means when a goal to save money is salient (Wilcox, Kramer, and Sen 2011). Similarly, incidental fear can discourage the pursuit of goals that have immediate consequences for an individual, even if the goal pursuit is not responsible for the experience of fear (Lerner and Keltner 2000).

Evidence that people are sensitive to emotions that are incidental to the pursuit of currently active goals implies that people have an implicit understanding of the usefulness of emotions. If this is so, there should be situational factors that determine when an emotion will function as information that can modify goal pursuit. First, emotions should modify goal pursuit when the subroutines that define the emotion are relevant to the goal and/or situation. To understand this proposition, consider a person with a goal of socializing who subsequently experiences anger. One common subroutine of anger is to lash out at others, even others who were not responsible for the anger (Carver and Harmon-Jones 2009). To the extent people experiencing anger can anticipate the potentially negative consequences of pursuing a social goal (i.e., the negative consequences of lashing out at innocent others), they can attenuate the pursuit of the goal.

Second, the ability of an emotion to modify goal pursuit should depend on the timing of the emotional experience relative to the goal activation. If an emotion is

experienced prior to goal activation, it is possible that the emotion will initiate its own goal-directed behavior. This proposition is predicated on the understanding that each emotion is comprised of motivational action tendencies (Frijda 2005). As a result, once emotion-initiated behavior is underway, subsequent goal activation may be ignored or overridden if the goal does not fit with the emotion-initiated behavior (Tooby and Cosmides 1990). For instance, a common subroutine of happiness is to work at tasks geared towards self-improvement (Trope, Igou, and Burke 2006). To the extent that happiness initiates behavior geared towards self-improvement (e.g., exercising), the functional response to the subsequent activation of a goal that is incongruous with current behavior (e.g., relaxing) may not alter the emotion-initiated behavior. Taken together, the potential for an emotion to modify goal pursuit should depend on its relevance to the goal and when it is experienced relative to the activation of the goal.

### **Sadness and a Hedonic Eating Goal**

Sadness is an emotion that elicits a sense of loss (Frijda 2005; Lazarus 1991; Lench et al. 2011). This sense of loss can relate to any resource that affects one's health or overall well-being, such as the death of a loved one, an encounter with a debilitating ailment, or a breakup with a significant other (Keller and Nesse 2006; Nesse 2006; Raghunathan and Pham 1999). A central adaptive function of sadness is to prompt personal reflection in response to the sense of loss, allowing one to assess and potentially revise subsequent goal-directed behavior (Bonanno, Goorin, and Coifman 2008; Welling 2003). How sadness influences indulgent consumption will depend on the functional response to the sense of loss. Based on our description of the functionalist perspective,

we propose that there are two functional responses a consumer can adopt: (1) prevent further loss, (2) regulate the emotion.

*A loss-preventing response* occurs when the functional response to sadness is to accept the loss and adopt a higher level of vigilance, in order to prevent further loss. Consistent with this proposition, Nesse (2000, 2006) has argued that a functional adaptation of sadness is to enhance a person's ability to detect and inhibit potentially harmful behaviors that could lead to further loss. Similarly, Stearns (1993) has proposed that sadness should heighten a person's sensitivity to harm in the presence of cues that have led to losses in the past. In this way, sadness acts as an associative bridge, drawing from past losses to inform situations in which future losses could occur. However, since not all loss is preventable, sadness leads people to focus on their goal pursuit because goal pursuit is one potential avenue for further loss that is under the person's control. This adaptive influence of sadness is consistent with previous research discussing the ability of sadness to encourage a review of and/or alter goals owing to a realization of the potential for loss (Power 1999). The implication is that the loss-preventing response of sadness should occur in the presence of goals that have the potential for harm, as when one pursues a hedonic eating goal. Unhealthy eating is a threat to one's fitness and is associated with feeling bad about one's self (Tice and Bratslavsky 2000), overeating (Cochran and Tesser 1996), and health problems (Chandon and Wansink 2012). Thus, the loss-preventing response should modify a hedonic eating goal and decrease indulgent food consumption.

Although there is no direct evidence linking hedonic goal activation, sadness, and a reduction in indulgent consumption, there are several findings suggesting indulgence is

considered to be a source of further loss. First, we know that the negative long-term consequences of indulgence impact consumers in a number of ways, as reflected in consumer overspending (Baumeister 2002), weight gain and obesity (Sharpe, Staelin, and Huber 2008; Wang and Beydoun 2007), superfluous materialism (Ordabayeva and Chandon 2011), and addiction (Grant et al. 2010). Second, consumers know they are susceptible to the negative consequences of indulgence (Cochran and Tesser 1996; Polivy and Herman 1985). Third, there are instances in which hedonic impulses are overridden by the activation of virtuous goals (Fishbach et al. 2003). The implication is that consumers can learn to anticipate the negative consequences of their indulgent behavior, as long as the context enables learning.

The foregoing predictions pertain to situations in which a hedonic eating goal is active. When there is no active goal, or sadness is not informative to an active goal, sadness should initiate an *emotion regulation response* (Gross and Thompson 2007; Williams et al. 2009). Emotion regulation refers to strategies for amplifying, dampening, or sustaining an emotion (Gross and Thompson 2007). People in a negative emotional state often engage in actions that will make them feel better (Magen and Gross 2010), including indulgent consumption (Andrade and Cohen 2007). For example, Tice et al. (2001) found that consumers ate more comfort food when they read a story about a child who died in a car accident as opposed to a story about a child who was saved. Garg, Wansink, and Inman (2007) showed that watching a sad movie led consumers to eat more popcorn than watching a happy movie. In each of these cases, the presence of a negative emotion initiated a strategy to mitigate the emotion, and the context encountered after

(e.g., available indulgent food) only facilitated, rather than inhibited, the use of the strategy.

### **Summary**

The following studies examine the goal-dependent influence of sadness on indulgent eating behavior, the processes responsible for this influence, and its boundary conditions. We predict that in the presence of a hedonic eating goal, sadness will exert a loss-preventing response, which will increase one's sensitivity to the potentially harmful consequences of indulgence and reduce indulgent consumption. In the presence of goals that do not have potentially harmful consequences, or when no goals are active, sadness will encourage emotion regulation and indulgent consumption will occur.

### **STUDY 1**

Study 1 investigated the influence of sadness when there was an active hedonic eating goal (henceforth called "hedonic goal," for brevity). A hedonic goal was primed by having participants create a list of indulgent activities (Fishbach and Labroo 2007). Sadness was induced via a scenario-based writing task. Indulgent consumption was assessed by providing participants an opportunity to consume M&M's (Garg et al. 2007; McFerran et al. 2010). We predicted that sad people would indulge more when no goal was active because of emotion regulation efforts. We predicted that sad people would indulge less when a hedonic goal was active because a loss-preventing response would encourage an avoidance of behaviors with potentially harmful long-term consequences.

The study included additional experimental conditions intended to increase our confidence that the loss-preventing response was not characteristic of any negative



emotion (Greifeneder, Bless, and Pham 2011). To test this possibility, anger and fear conditions were included in the study. These emotion conditions are informative because the functionalist perspective predicts that neither of these emotions should discourage indulgent consumption when a hedonic goal is active.

Anger is an emotion that is accompanied by a sense of frustration with the external agents responsible for preventing desirable outcomes (Carver and Harmon-Jones 2009; Stein and Levine 1990). To the extent a hedonic goal is active, the functional response to anger should be to overcome any perceived obstacles to indulgent consumption (Izard 1993). Given an environment where there are no obstacles, as was the case in our procedure, anger should not influence the amount of indulgent consumption when a hedonic goal is active. Fear is an emotion that is accompanied by an increased sensitivity to imminent danger (Griskevicius et al. 2009; Öhman and Mineka 2003). For example, common sources of fear are physical objects or events (e.g., heights, thunder), interpersonal situations (e.g., social exclusion), and animals (e.g., snakes, spiders) (Öhman and Mineka 2001). The functional response to fear is to ignore long-term consequences and focus on the present danger. Thus, the myopic focus that accompanies fear should make it non-informative to hedonic goal pursuit (i.e., it should not influence the amount of indulgent consumption). It should be noted that the functionalist prediction differs from that made by appraisal theory, which posits that fear leads to an appraisal of uncertainty and a lack of control (Raghunathan and Pham 1999). Uncertainty and a lack of control should discourage goal persistence and reduce indulgent consumption.

## Method

*Participants and Design.* Participants were 239 undergraduate students (47% female,  $M_{Age} = 19.82$ ) who participated in exchange for course credit. The design was a 2 (goal prime: neutral vs. hedonic) x 4 (emotion: no emotion, anger, fear, sadness) between-subjects design. All participants were asked to indicate if they were willing to consume food. In this and all other consumption studies, participants were excluded from taking the study if they indicated that they were unwilling to consume food.

*Procedure and Stimuli.* Participants entered a behavioral lab and were individually seated at desks in front of personal computers. Participants were then told that there were three studies in the session, supposedly unrelated and pooled together out of convenience. The first study was a goal priming task, adapted from Fishbach and Labroo (2007). Participants were told that the researchers were interested in undergraduate students' activities. Participants in the neutral goal prime condition listed activities that they performed throughout the course of a normal day. Participants in the hedonic goal prime condition were told that people seek pleasure and that the researchers wanted to learn about the types of activities that they used to indulge themselves. They were then asked to list indulgent activities.

After completing the priming task, all participants moved to a second study which supposedly investigated how well people were able to immerse themselves in hypothetical situations. Unknown to participants, each person received a different emotion manipulation. Participants in the sadness condition read a scenario entitled "Breakup," in which the person in the passage experiences intense sadness at the end of an extended romantic relationship. Participants in the anger condition read a scenario

entitled “Computer Trouble” in which the person in the passage experiences a great deal of difficulty getting technical support. Participants in the fear condition read a scenario entitled “Turbulence” in which the person in the passage is on a turbulent flight that begins a rapid descent. Participants in the no-emotion control group read a scenario entitled “Cleaning Day” which described an emotionally neutral scenario where the person in the passage spends some time cleaning their home. Participants in all four conditions were asked to read the passage and imagine, as vividly as possible, what it would feel like to be in that situation. To strengthen the manipulation, participants were asked to spend a few minutes writing about how they felt while reading the passage and to describe an experience in which they felt the same way.

In the third study, participants were told that they would be taking part in a taste test that investigated the compatibility of foods with different videos. The instructions explained that participants would have the opportunity to consume M&M’s while watching a YouTube video and that they could consume as many M&M’s as they wanted. Participants were also told that after watching the video, they would be asked a few follow-up questions about how well the food went with the video. In the corner of each participant’s desk sat a bag of M&M’s placed inside a Styrofoam bowl, which was covered by a napkin. Participants were told to remove the napkin from the top of the bowl, open and empty out the entire bag of M&M’s into the bowl, and then proceed with watching the video. Every participant watched a video about how to make origami. The video was approximately four minutes long and selected because of its neutral content. Participants were told that they could stop watching the video at any point and to call over the experimenter if they desired to move on to the next part of the task. Bowls were

collected when participants called the experimenter or the video ended. Bowls were subsequently weighed to determine consumption.

To maintain the cover story, participants then answered a few questions about the task itself, including how compatible the M&M's were with the video they watched. Participants were then told that they would also answer a few general questions about M&M's. Our critical question asked to what extent eating foods like M&M's have the potential to lead to health problems later in life (1 = "Strongly disagree," 9 = "Strongly agree"). This measure of the potential harm from indulgence was expected to mediate the influence of the hedonic goal priming in the sadness condition, but not in the other emotion conditions. Participants were then extensively debriefed for suspicion, told about the real purpose of the experiment, thanked for their help, and dismissed. No participant guessed the real purpose of the study or how the goal priming and emotion task could jointly have influenced their food consumption.

### **Pretest of Emotion Manipulations**

A pretest ( $N = 79$ ) assessed the efficacy of the emotion manipulations (see table 2.1). Participants were asked to indicate how sad, angry, and afraid they felt at baseline (prior to the hypothetical scenario) and after the emotion manipulation on nine-point scales (1 = "Not at all," 9 = "Extremely"). Participants also indicated their overall mood (1 = "Negative mood," 9 = "Positive mood"). Participants in the anger, fear, and sadness conditions felt significantly more of their induced emotion after the emotion manipulation. Participants in the anger, fear, and sadness conditions did not differ in negative mood after the emotion manipulation ( $F < 1$ ), which suggests that any observed

differences between angry, fearful, and sad participants is not likely a result of differences in mood.

## Results

*Consumption.* The means indicating the amount of indulgent consumption, in this and all subsequent studies, are presented in table 2.2. An ANOVA on the amount eaten revealed an interaction between the goal priming and emotion factors ( $F(3, 231) = 5.51, p < .01$ ; see fig. 2.1). In the neutral goal prime condition, participants in the anger ( $M = 23.72; F(1, 231) = 8.40, p < .01$ ), fear ( $M = 19.43; F(1, 231) = 3.12, p = .08$ ), and sadness conditions ( $M = 24.66; F(1, 231) = 9.80, p < .01$ ) ate more M&M's than in no emotion condition ( $M = 13.33$ ). These results suggest that in the absence of an active goal, negative emotions will prompt emotion regulation. In the hedonic goal prime condition, participants made to feel sad consumed less M&M's ( $M = 12.15$ ) than participants in the no emotion ( $M = 22.89; F(1, 231) = 6.94, p = .01$ ), anger ( $M = 26.01; F(1, 231) = 12.28, p < .01$ ), and fear conditions ( $M = 23.25; F(1, 231) = 7.63, p < .01$ ). These results are consistent with the loss-preventing response of sadness. In the no emotion condition, participants consumed more M&M's in the hedonic goal prime condition ( $M = 22.89$ ) than in the neutral goal prime condition ( $M = 13.33; F(1, 231) = 5.84, p = .01$ ). This result verifies the efficacy of the hedonic goal priming manipulation.

Comparisons of priming conditions within each emotion were also consistent with the hypothesized loss-preventing response of sadness. In the sadness condition, participants in the hedonic goal prime condition consumed less M&M's ( $M = 12.15$ ) than in the neutral goal prime condition ( $M = 24.66; F(1, 231) = 9.63, p < .01$ ). In the anger condition, participants consumed similar amounts of M&M's in the neutral goal prime

( $M = 23.72$ ) and hedonic goal prime conditions ( $M = 26.01$ ;  $F < 1$ ). Similarly, in the fear condition, participants consumed similar amounts of M&M's in the neutral goal prime ( $M = 19.43$ ) and hedonic goal prime conditions ( $M = 23.25$ ;  $F < 1$ ). These results demonstrate that the hedonic goal-based reduction in indulgence was specific to sadness. Not all negative emotions decreased indulgent consumption when a hedonic goal was active.

*Mediation by Potential Harm from Indulgence.* The results of the harm-from-indulgence measure revealed a goal priming by emotion interaction ( $F(3, 231) = 2.73, p < .05$ ). The hedonic prime led to expectations of more potential harm from indulgence in the sadness condition ( $M_{\text{Neutral}} = 3.93, M_{\text{Hedonic}} = 5.57$ ;  $F(1, 231) = 5.92, p < .01$ ), but not in the no emotion ( $M_{\text{Neutral}} = 4.63, M_{\text{Hedonic}} = 3.77$ ;  $F(1, 231) = 1.72, p > .10$ ), anger ( $M_{\text{Neutral}} = 3.38, M_{\text{Hedonic}} = 3.43$ ;  $F(1, 231) = .01, p > .10$ ), or fear ( $M_{\text{Neutral}} = 4.07, M_{\text{Hedonic}} = 3.55$ ;  $F(1, 231) = .60, p > .10$ ) conditions.

We predicted that expectations of more potential harm from indulgence would mediate the influence of the goal prime on the amount of M&M's consumed in the sadness condition, but not in the other emotion conditions. To test this prediction, we used Mplus<sup>®</sup> to perform a multi-group analysis for moderated mediation. A benefit of Mplus, over a macro such as PROCESS (Hayes 2013), is its ability to perform the simultaneous estimation, and comparison, of the indirect effects of a mediator (potential harm from indulgence) at the various levels of a multicategorical moderator (emotion). Supporting our predictions, the pathway from goal prime to consumption through potential harm was significant and did not include zero in the sadness condition (indirect effect =  $-3.93$ ; 95% CI:  $-9.81$  to  $-.52$ ), but was not significant in the anger (indirect effect

= .05; 95% CI: -1.64 to 1.60), fear (indirect effect = .26; 95% CI: -1.13 to 2.21), or no emotion (indirect effect = .50; 95% CI: -.73 to 2.50) conditions. Additionally, a test comparing the indirect effect in the sadness condition to the indirect effect in the no emotion condition was significant (difference in indirect effects = -4.43; 95% CI: -10.47 to -.87), while the same emotion-control condition comparison tests for anger (difference in indirect effects = -.45; 95% CI: -3.14 to 1.45) and fear (difference in indirect effects = -.24; 95% CI: -2.57 to 2.28) were not significant.

### **Ancillary Study**

A common strategy for bolstering evidence about a proposed mediating process is to measure an individual difference variable that correlates with the mediator (e.g., Hong and Sun 2012; Garg and Lerner 2013; Ramanathan and Menon 2006; Winterich and Haws 2011). Given our claim that sadness increases a person's sensitivity to the potential negative consequence of indulgent consumption (a mediator), we sought to isolate an individual difference variable that would increase the impact of this variable, thus, providing additional support for its relevance. Nenkov, Inman, and Hulland (2008) show that people become better at self-control when they focus on potentially negative outcomes. People that are able to recognize the link between their short-term behaviors and the long-term consequences of their behaviors are less impulsive. We expect that people with this trait should be most sensitive to the combined effects of hedonic goal pursuit and sadness on indulgent consumption. Therefore, we measured people's tendency to focus on the potential for negative outcomes using the negative-outcome-focus subscale from the Elaboration on Potential Outcomes scale (EPO; Nenkov et al. 2008). We hypothesized that people who were most sensitive to negative outcomes

should show the greatest decrease in indulgent consumption owing to sadness, provided a hedonic goal was active.

*Procedure.* The experiment was a two-cell design consisting of the neutral and hedonic goal prime conditions in the sadness condition of study 1. The procedure was identical to study 1 except for the following changes. First, participants began the session by answering questions that were purported to help researchers better understand the characteristics of the student body. Participants were asked their age, gender, and 10 personality questions, including four items from the negative-outcome-focus subscale of the Elaboration on Potential Outcomes scale (1 = “Strongly disagree,” 7 = “Strongly agree”) (Nenkov et al. 2008). The items were “I tend to think a lot about the negative outcomes that might occur as a result of my actions,” “When thinking over my decisions I focus more on their negative end result,” “I often worry about what could go wrong as a result of my decisions,” and “I am often afraid that things might turn out badly.” Second, goal priming was accomplished using print ads. Participants in the neutral (hedonic) goal prime condition rated the effectiveness of six neutral (hedonic) print ads on a scale ranging from one (Not at all effective) to nine (Very effective). Neutral ads were for a refrigerator, washing machine, short film festival, jeans, electric car, and trading company. Hedonic ads were for chocolate cake, pizza, French fries, chips, a hamburger, and cinnamon rolls. The emotion manipulation and M&M’s eating task were the same as study 1, except that the video was about how to fix a showerhead.

*Participants and Results.* Participants were 128 undergraduate students (52% female,  $M_{\text{Age}} = 20.22$ ) who participated in exchange for course credit. Sad participants in the hedonic goal prime condition consumed less M&M’s ( $M = 14.59$ ) than in the neutral



goal prime condition ( $M = 19.97$ ;  $t(126) = 2.34$ ,  $p < .05$ ), which replicates the results of study 1. Moreover, the interaction between the negative outcome focus ( $\alpha = .89$ ) and goal prime manipulation was significant ( $\beta = -2.98$ ,  $p < .05$ ). To explore the nature of this interaction, we performed a spotlight analysis (see figure 2.2) (Fitzsimons 2008). At 1 SD below the mean of negative outcome focus (i.e., low focus on potential negative outcomes), participants in the neutral and hedonic goal prime conditions did not differ in the amount of M&M's eaten ( $\beta = -.51$ ,  $p > .40$ ). At 1 SD above the mean of negative outcome focus (i.e., high focus on potential negative outcomes), participants ate less M&M's in the hedonic goal prime condition than in the neutral goal prime condition ( $\beta = -9.30$ ,  $p < .01$ ).

## **Discussion**

Study 1 provides support for the claim that sadness encourages emotion regulation when no goal is active, but a loss-preventing response when a hedonic goal is active. Emotion regulation was evident in the neutral goal prime condition, where sadness increased indulgent consumption relative to the no emotion control group. The loss-preventing response was evident in the hedonic goal prime condition, where sadness reduced indulgent consumption relative to the no emotion control group. The reduced consumption in the hedonic goal prime condition of the sadness condition depended on participants' concerns about future harm (study 1). Moreover, participants with a negative outcome focus were most susceptible to the combined influence of the goal prime and sadness (ancillary study). Finally, similar results were not obtained for anger and fear, suggesting that these emotions were not informative with respect to the pursuit

of the hedonic goal. Instead, emotion regulation dictated the response in the anger and fear conditions.

## STUDY 2

Study 2 was designed with two objectives in mind. The first objective was to provide additional evidence for the loss-preventing response of sadness. We have argued that the loss-preventing response makes people more sensitive to the potentially harmful consequences of engaging in indulgent consumption. If this is so, the influence of a loss-preventing response should be mitigated when people are made to feel safe and secure. This hypothesis is consistent with the tendency to seek attachment and security following a loss (Bonanno et al. 2008; Bowlby 1969). One way in which people can be made to feel safe is through imagery visualization (Gershoff and Koehler 2011). To the extent that one is able to create a sense of safety, there should be less sensitivity to the potential for long-term harm and indulgent consumption should occur more freely.

The second objective was to show that the loss-preventing response of sadness only exerts an influence in the presence of goals that have potentially harmful consequences associated with their pursuit. If a previously activated goal is not inherently harmful, then sadness should not impact pursuit. To test this prediction, we included a condition in which a creativity goal was primed. We predicted that sadness would not be informative for a creativity goal because the pursuit of the goal has minimal potential for harmful consequences. As a result, we predicted that the presence of this goal would not stop consumers from indulging as a way to feel better (i.e., emotion regulation would take precedence).

These hypotheses were investigated using a consumption context similar to study 1, except that participants were allowed to eat chocolate chip cookies instead of M&M's. When an emotion regulation response was active (i.e., a creativity goal was active or participants felt safe), participants should have an increased desire for the indulgent food. The desire to engage in emotion regulation should make the food more attractive. When a loss-preventing response was active (i.e., when a hedonic goal was active and participants were sad), participants should have a reduced desire for the indulgent food. This should occur because the loss-preventing response focuses on behaviors that have long-term instrumental value. When participants were made to feel safe, the loss-preventing response should be mitigated and emotion regulation should occur.

## **Method**

*Participants and Design.* Participants were 331 undergraduate students (51% female,  $M_{Age} = 20.07$ ) who participated in exchange for course credit. The design was a 2 (goal prime: hedonic vs. creativity) x 2 (emotion: no emotion vs. sadness) x 2 (safety: control vs. felt) between-subjects design.

*Procedure and Stimuli.* Participants entered a behavioral lab and were individually seated in front of personal computers. Participants were then told that there were three studies in the session, supposedly unrelated. The first study was a goal priming task. As in study 1, participants in the hedonic goal priming condition were told that people seek pleasure and that the researchers wanted to learn about these activities. They were then asked to list their favorite indulgent activities. Participants in the creativity goal priming condition were told that people seek to exhibit their creativity in a

variety of ways and that the researchers wanted to learn about these activities. They were then asked to list their favorite creative activities.

All participants then moved to a second study that administered the emotion manipulation. The sadness and no emotion manipulations were identical to those used in study 1. Participants in the sadness (no emotion) condition read the “Breakup” (“Cleaning Day”) scenario, imagined what it would feel like to be in that situation, and then spent a few minutes writing about how they felt while reading the passage and describing a similar personal experience. After the emotion manipulations, participants in the felt safety and control conditions were told, “Before you continue on with the next study, it is important that you take a moment to clear your mind using an imagination task.” Participant in the felt safety condition were asked to “close your eyes and think about how family provides us with lasting security and protection” and to “take the next minute to close your eyes and imagine how family helps us to know that everything will be okay.” Participants in the control condition were asked to “close your eyes and think about a blank, white wall in front of you” and “take the next minute to close your eyes and imagine what this wall would look like.”

In the third study, participants were told that they would be taking part in a taste test that investigated the compatibility of foods with different videos. The instructions explained that participants would have the opportunity to consume cookies while watching a YouTube video. As in study 1, participants were told that they could consume as much or as little as they wanted and that they would be asked follow-up questions after the video. Participants were asked to open a two ounce bag of Famous Amos Chocolate Chip Cookies that had been placed and covered with a napkin in the corner of their carrel.

Participants then watched a four minute video about how to make origami. After watching the entire video, participants were instructed to stop eating and to record the number of uneaten cookies. This number was subtracted from 10 to calculate the total number of cookies consumed. Afterwards, participants indicated how compatible the cookies were with the video as well as some general questions about cookies. Our critical question asked to what extent eating foods like cookies have the potential to lead to health problems later in life (1 = “Strongly disagree,” 9 = “Strongly agree”). This measure of the potential harm from indulgence was expected to mediate the influence of the hedonic goal priming in the sadness condition, but not in the no emotion condition. Participants were then extensively debriefed for suspicion, told about the real purpose of the experiment, thanked for their help, and dismissed. No participant guessed the real purpose of the study or how the goal priming and emotion task could jointly have influenced their food consumption.

## **Results**

*Consumption.* An ANOVA revealed a three-way interaction of emotion, goal prime, and the safety induction ( $F(1, 323) = 4.22, p < .05$ ; see fig. 2.3). The analysis of this interaction was conducted in two parts. The first part confirmed that there was (1) an emotion regulation effect and, (2) a hedonic goal priming effect. Participants primed with the creativity goal were used to test for the emotion regulation effect. Consistent with emotion regulation, sad participants ( $M = 6.94$ ) ate more cookies than no emotion participants ( $M = 5.82$ ;  $F(1, 323) = 5.40, p < .05$ ). The no emotion participants were used to test for hedonic goal priming. Consistent with hedonic goal priming, participants in the

hedonic goal prime condition ( $M = 6.93$ ) ate more cookies than participants in the creativity goal prime condition ( $M = 5.82$ ;  $F(1, 323) = 5.53, p < .05$ ).

The second part of the analysis focused on (1) the loss-preventing response that should emerge from a combination of the hedonic goal prime and sadness and, (2) the mitigation of the loss-preventing response when a participant was made to feel safe. Both effects were investigated in the hedonic goal prime condition, where there was an interaction of emotion and the safety induction ( $F(1, 323) = 6.59, p = .01$ ). Participants in the control condition were used to test for the loss-preventing response. Consistent with the hypothesis of a loss-preventing response, sad participants ate less cookies ( $M = 5.45$ ) than no emotion participants ( $M = 7.16$ ;  $F(1, 323) = 7.22, p < .01$ ). Participants in the sad condition were used to assess if felt safety mitigated the influence of the sadness. Consistent with the hypothesis of a mitigating influence of safety, participants in the felt safety condition ate more cookies than ( $M = 7.33$ ) than in the control condition ( $M = 5.45$ ;  $F(1, 323) = 7.31, p < .01$ ).

*Mediation by Potential Harm from Indulgence.* An ANOVA on the potential-harm-from-indulgence measure did not reveal a significant three-way interaction of emotion, goal prime, and the safety induction ( $F < 1$ ). Our main focus, however, was on the prediction that the perceived potential for harm from indulgence should only be responsible for the reduced consumption for hedonically-primed sad participants when safety was not felt. Therefore, the effect of emotion on consumption should be moderated by the goal prime and safety induction, and mediated by the potential harm from indulgence in the hedonic goal prime, control condition, but not in the hedonic goal prime, felt safety condition. We tested this prediction by conducting a moderated

mediation analysis using model 10 in the PROCESS macro (Hayes 2013), which allows for the analysis of two moderators (goal prime and safety induction) and their respective interactions with the predictor variable (emotion). Supporting this prediction, in the hedonic goal prime, control condition, the pathway from the emotion manipulation to consumption through potential harm (indirect effect) was significant and did not include zero (indirect effect =  $-.21$ ; 95% CI:  $-.52$  to  $-.01$ ), which supports mediation (Zhao, Lynch, and Chen 2010). In the hedonic goal prime, felt safety condition, the indirect effect was not significant and included zero (indirect effect =  $.09$ ; 95% CI:  $-.10$  to  $.39$ ). There was also no evidence for mediation in the creativity goal prime, control condition (indirect effect =  $-.15$ ; 95% CI:  $-.45$  to  $.04$ ) or the creativity goal prime, felt safety condition (indirect effect =  $.15$ ; 95% CI:  $-.03$  to  $.46$ ). Finally, we note that a moderated mediation analysis (model 8) within the control condition, with goal prime as the predictor variable and emotion as the moderating variable, revealed a marginally significant indirect effect of potential harm on consumption in the sadness condition (indirect effect =  $.59$ ; 94% CI:  $-1.17$  to  $-.01$ ). This replicates the indirect effect of potential harm observed in the sadness condition of study 1, under the assumption that the creativity (study 2) and neutral (study 1) goal prime conditions are equivalent in terms of their potential for harm when pursued.

## **Discussion**

Study 2 provides evidence that increased sensitivity to the potentially harmful consequences of indulgence is responsible for the loss-preventing response of sadness. When a sense of safety was induced, however, people were less sensitive to the potential harm, which led to indulgent consumption. In addition, sadness did not result in a loss-

preventing response when the active goal (e.g., creativity) was not potentially harmful. This implies that goal states are informative with respect to the response (e.g., emotion regulation, loss-preventing) an emotion (e.g., sadness) will induce.

### STUDY 3

As discussed earlier, when sadness is experienced in the absence of a previously activated goal, the default program associated with the emotion should be initiated, and people should engage in emotion regulation. It is only when a hedonic goal is active prior to a person becoming sad that sadness signals the potential for harm, as demonstrated in studies 1 and 2. Therefore, when hedonic goal activation follows the experience of sadness, we expect that the drive to regulate emotion has already taken hold. The addition of cues suggesting indulgence might even amplify the effect of emotion regulation, resulting in overindulgence.

#### Method

*Participants and Design.* Participants were 250 members of an online panel (Mechanical Turk, 53% female,  $M_{Age} = 33.60$ ). The design was a 2 (timing of hedonic goal activation: before emotion vs. after emotion) x 2 (emotion: no emotion vs. sadness) between-subjects design. All participants were primed with a hedonic goal. Twenty three participants failed to fully read the instructions and were excluded (Oppenheimer, Meyvis, and Davidenko 2009), leaving a final sample of 227 used in subsequent analyses.

*Procedure and Stimuli.* Participants were told that they would participate in three unrelated studies. The first study purportedly investigated cognitive processes associated with unscrambling sentences. In truth, the study was a hedonic goal priming task.



Participants were presented with 10 sets of five words and asked to form sentences by unscrambling those words. Each sentence contained a hedonically-themed word consistent with the prime (flavor, food, taste, enjoyable, pleasure, delicious, delightful, indulge, diner, and savor). For example, participants unscrambled sets of words with hedonic content, such as “has she taste good very.”

The second study was the emotion induction task. It used the same no emotion and sadness scenarios from study 1 and 2. In accordance with the experimental design, the order in which the hedonic goal priming and the emotion induction studies were presented was counterbalanced.

In the third study, participants were told that the researchers were recruiting people to take part in taste tests that would involve eating food. Each participant was asked to choose between taking part in a “Raisin-Eating Study” or “M&M’s-Eating Study.” Participants were also told that each taste test were equivalent in time and difficulty, and that this was a real choice. A pretest ( $N = 32$ ) confirmed that participants considered the M&M’s study ( $M = 5.31$ ) to be more indulgent (1 = “Not indulgent at all,” 7 = “Very indulgent”) than the raisin study ( $M = 2.25$ ;  $t(31) = 10.79$ ;  $p < .01$ ), and that the M&M’s study ( $M = 5.75$ ) had greater potential for harmful consequences of overindulgence to occur (1 = “Very little potential,” 7 = “A great deal of potential”) than the raisin study ( $M = 2.47$ ;  $t(31) = 11.11$ ;  $p < .01$ ).

After making their choice, participants were asked to indicate the extent to which they were “thinking about how indulgent foods can be harmful when consumed in excess” (1 = “Not at all,” 9 = “A great deal”). To provide additional evidence for the sensitivity to the potential harm from indulgence, we then asked participants to think

about the M&M's-eating study (the indulgent study) and provide reasons for why they would or would not want to take part in the study. We were interested in how many participants would provide reasons against the study related to the harmful consequences of indulgence.

## Results

*Choices.* A binary logistic regression revealed an interaction between the timing of hedonic goal activation and emotion on the choice of a taste test ( $\chi^2(1) = 10.28, p < .01$ ; see fig. 2.4). When the hedonic goal was activated before the emotion task, participants in the no emotion condition were more likely to select the M&M's-eating study (66.7%) than participants in the sadness condition (42.4%;  $\chi^2(1) = 7.08, p < .01$ ). When the hedonic goal was activated after the emotion task, participants in the no emotion condition were less likely to select the M&M's-eating study (61.8%) than participants in the sadness condition (79.2%;  $\chi^2(1) = 3.93, p < .05$ ).

*Mediation by Potential Harm from Indulgence.* An ANOVA on the perceived potential harm from indulgence revealed an interaction between the timing of hedonic goal activation and emotion ( $F(1, 223) = 4.24, p < .05$ ). When the hedonic goal was activated before the emotion task, there was a greater potential harm in the sadness ( $M = 5.63$ ) than in the no emotion condition ( $M = 4.30$ ;  $F(1, 223) = 6.60, p = .01$ ). When the hedonic goal was activated after the emotion task, the potential harm was similar in the sadness ( $M = 4.59$ ) and the no emotion conditions ( $M = 4.80$ ;  $F < 1$ ).

We used PROCESS model 8 (Hayes 2013) and predicted that the effect of emotion on food choice would be moderated by the timing of the hedonic goal activation and mediated by potential harm in the sadness condition, but not in the no emotion

condition. Supporting our predictions, when the hedonic goal was activated before the emotion task, the pathway from emotion condition to study choice through potential harm (indirect effect) was significant and did not include zero (indirect effect =  $-.42$ ; 95% CI:  $-.82$  to  $-.10$ ), which supports mediation. When the hedonic goal was activated after the emotion task, the indirect effect was not significant and included zero (indirect effect =  $.07$ ; 95% CI:  $-.29$  to  $.42$ ), which does not support mediation. These results show that when a person was feeling sad, the potential harm from indulgence did not influence food choice unless the hedonic goal was active prior to the emotion regulation response.

*Reasons Related to Harmful Consequences of Indulgence.* To analyze the qualitative data, we created a variable that was coded as zero if the participant did not list any reasons related to harm from indulgence, and one if the participant did. Examples of reasons related to harm from indulgence included “Candy is harmful to everyone.”, “I tend to over consume on sweet foods.”, “M&M’s are dangerous.”, and “M&M’s are a risk to our health.” We then compared the number of harm-from-indulgence-themed responses across conditions. A binary logistic regression showed an interaction between the timing of hedonic goal activation and emotion on reasons ( $\chi^2(1) = 4.39, p < .05$ ). When the hedonic goal was activated before the emotion task, participants in the sadness condition were more likely to list reasons related to the harm from indulgence (71.2%) than participants in the no emotion condition (51.7%;  $\chi^2(1) = 4.78, p < .05$ ). When the hedonic goal was activated after the emotion task, participants in the sadness condition were as likely to list reasons related to the harm from indulgence (39.6%) as participants in the no emotion condition (47.3%;  $\chi^2(1) = .64, p > .40$ ).

## **Discussion**

The results shed additional light on when the emotion regulation versus the loss-preventing response of sadness will influence indulgent consumption. When the hedonic goal preceded the experience of sadness, the loss-preventing response took hold. People focused on the potentially harmful consequences of indulgence and indicated a reduced desire for indulgent consumption. When the hedonic goal did not precede the experience of sadness, emotion regulation took hold. People focused on emotion regulation and indicated an increased desire for indulgent consumption. The results are consistent with our conceptualization that the experience of sadness is informative only when a previously activated goal has potentially harmful consequences associated with its pursuit.

## **STUDY 4**

If decreasing indulgent consumption is a protective response to the potentially negative consequences of indulgence, then increasing the amount of hedonic goal activation should increase the salience of these consequences and influence indulgent consumption. One way to encourage a stronger hedonic goal is to expose people to additional environmental cues associated with this goal. Thus, study 4 used a procedure that included both a scrambled sentence task and exposure to pictures of tempting food, a task which has been used by Geyskens et al. (2008) to increase indulgent consumption. In the absence of sadness, this stronger hedonic goal should result in an increased desire for indulgent goods. In the presence of sadness, a stronger hedonic goal should encourage

even less indulgent consumption. Increased activation of the hedonic goal should result in increased vigilance and an increased desire to avoid indulgent consumption.

## **Method**

*Participants and Design.* Participants were 342 undergraduate students (47% female,  $M_{Age} = 19.97$ ) who participated in exchange for course credit. The design was a 3 (goal prime: neutral, hedonic, strong hedonic) x 2 (emotion: no emotion vs. sadness) between-subjects design.

*Procedure and Stimuli.* Participants were told that they would participate in three unrelated studies. The first study was purportedly investigating cognitive processes associated with unscrambling sentences. In truth, the study was a goal priming task. Participants were presented with 10 sets of five words and asked to form sentences by unscrambling those words. The materials for the hedonic goal prime condition were the same as in study 3. In the neutral goal prime condition, participants unscrambled sets of words with neutral content, such as “a had trip they great.” Participants in the strong hedonic goal prime condition completed one additional task after unscrambling the hedonically-themed sentences. These participants were told that we were pretesting stimuli to be used at a later date. They were told that they would receive two pictures drawn from a larger set and they should click on the parts of the picture that they liked most. In truth, everyone in this condition received the same two pictures containing a variety of tempting foods (Geyskens et al. 2008). One picture contained a number of bakery treats and delectable meats, while the other picture contained slices of cake, pies, and éclairs.

Study two was the emotion induction task. It used the same no emotion and sadness scenarios as the prior studies.

The third study pertained to gifts. Participants were told that they would receive a gift card for participation in the session and that they could choose between a gift card to “A Grocery Store” or “A Trendy Restaurant.” Consistent with previous research (Okada 2005), a pretest ( $N = 32$ ) confirmed that participants considered the gift card for the trendy restaurant ( $M = 5.25$ ) to be more indulgent than the one for groceries ( $M = 2.94$ ;  $1 =$  “Not indulgent at all,”  $7 =$  “Very indulgent”;  $t(31) = 6.45$ ;  $p < .01$ ). Participants also indicated that the trendy restaurant ( $M = 5.53$ ) had greater potential for harmful consequences of overindulgence to occur ( $1 =$  “Very little potential,”  $7 =$  “A great deal of potential”) than the grocery store ( $M = 4.41$ ;  $t(31) = 2.60$ ;  $p = .01$ ). Participants were told that both gift cards were worth the same amount of money. After participants made their choice, they were extensively debriefed for suspicion.

## Results

A binary logistic regression shows an interaction between the goal prime and emotion on gift card choice ( $\chi^2(1) = 28.43$ ,  $p < .01$ ; see fig. 2.5). Within the no emotion conditions, participants in the hedonic goal prime condition were more likely to select the trendy restaurant gift card (65.5%) than participants in the neutral goal prime condition (46.4%;  $\chi^2(1) = 4.22$ ,  $p < .05$ ), and participants in the strong hedonic goal condition were more likely to select the trendy restaurant gift card (82.5%) than participants in the hedonic condition (65.5%;  $\chi^2(1) = 4.28$ ,  $p < .05$ ). These results confirm that the hedonic and strong hedonic goal prime manipulations worked as intended. Within the sadness conditions, however, participants in the hedonic goal prime condition were less likely to

select the trendy restaurant gift card (47.3%) than participants in the neutral goal prime condition (64.4%;  $\chi^2(1) = 3.39, p < .05$ ), and participants in the strong hedonic goal condition were less likely to select the trendy restaurant gift card (29.8%) than participants in the hedonic goal prime condition (47.3%;  $\chi^2(1) = 3.60, p < .05$ ).

Supporting the strength of the effect, the interaction between the hedonic and strong hedonic goal prime conditions and emotion on gift card choice remained significant even after removing the neutral goal prime condition from the analysis ( $\chi^2(1) = 7.70, p < .01$ ). Finally, sadness increased the choice of the trendy restaurant in the neutral goal prime condition, as would be predicted by emotion regulation ( $\chi^2(1) = 3.76, p = .05$ ).

### **Discussion**

The results provide further support for the claim that sadness can have goal-dependent influences on indulgent consumption. When no emotion was present, people became more indulgent as the hedonic goal became stronger (i.e., a stronger goal prime led to increased indulgence). When sadness was present, people became less indulgent as the hedonic goal became stronger (i.e., loss-preventing led to decreased indulgence). The results again support the idea that sadness can exert a protective function. This loss-preventing response increased in intensity as the drive to engage in the pursuit of a potentially harmful goal increased.

## **GENERAL DISCUSSION**

This research demonstrates that emotions can generate distinct functional responses depending on the presence or absence of certain consumer goals. Study 1 compared sadness to other negative emotions (anger and fear) and found that only

sadness reduced indulgent consumption in the presence of an active hedonic eating goal. The effect of sadness on decreasing indulgent consumption was driven by an increased sensitivity to the potential harm from indulgence. Study 2 found that (1) sadness only attenuated the pursuit of goals that had potentially harmful consequences and (2) inducing a sense of safety attenuated a consumer's sensitivity to these consequences. These findings suggest that the loss-preventing response of sadness only becomes germane in certain contexts. Study 3 showed that sadness only reduced indulgent consumption when it was experienced after, but not prior to, the activation of a hedonic eating goal. This is further evidence that contextual factors determine the functional response to emotions. Finally, study 4 showed that as the drive to indulge increased, sadness became even more effective at limiting indulgence. This suggests that the effectiveness of emotion, as a regulatory agent, is proportional to the strength of the drive it counteracts.

This article contributes to research showing that sadness is an evolutionarily adaptive emotion (Andrews and Thomson Jr. 2009; Keller and Nesse 2006). Research has shown that one function of sadness is to encourage an increased responsiveness to the environment (Nesse 1990, 2000). Consistent with this idea, our findings show that, in certain contexts, sadness encourages people to identify behaviors that are potentially harmful to their long-term fitness. This may occur because sadness induces consumers to link past harmful experiences to current predicaments in order to prevent similar losses from occurring in the future (Andrews and Thomson Jr. 2009). In our research, we demonstrate a specific instance in which sadness encourages vigilance and decreases indulgent consumption, as this is a behavior that can lead to further loss and harm. This



sensitivity to the potentially harmful consequences of specific types of goal pursuit should become more important as a person ages, as experience should help a person learn how to prevent repeated losses. Related to this idea, Kunzmann and Gröhn (2005) find that the sense of loss that accompanies sadness becomes progressively more intense as people grow older. Thus, it is possible that the loss-preventing response of sadness becomes stronger as people age.

### **Individual Differences and Goal / Emotion Combinations**

We found that the tendency to focus on negative outcomes increases the loss-preventing response of sadness. There may be other individual difference factors that have similar influences. For example, impulsivity might be an individual difference factor that has an impact on the loss-preventing response of sadness in the presence of a hedonic goal. Impulsive consumers struggle with resisting indulgent temptations (Mukhopadhyay, Sengupta, and Ramanathan 2008; Ramanathan and Williams 2007); consequently, the potentially harmful consequences of indulgent consumption may be more accessible in impulsive consumers' memories. Alternatively, it may be the case that impulsive consumers have chronically active hedonic goals, which could also lead to the loss-preventing response of sadness.

How consumers respond to self-control lapses may also prove to be an important individual difference factor to consider (Zemack-Rugar, Corus, and Brinberg 2012). Consumers who tend to regroup following a self-control lapse could exhibit a stronger loss-preventing response because they are more in touch with the benefits of avoiding indulgent consumption. In contrast, consumers who tend to further undermine themselves

following a lapse in self-control might display a weaker loss-preventing response because they fail to account for the negative aspects of indulgent consumption.

In addition to the consideration of individual difference factors that may influence indulgent consumption, research examining how goals and emotions shape other aspects of behavior remains largely uncharted. Most research on goals and emotions has focused on how behaviors resulting in goal attainment (nonattainment) can lead to the experience of positive (negative) emotions (Carver and Scheier 1998; Soman and Cheema 2004). Only recently have researchers started to examine how emotions can be informative to goal-directed behaviors (Louro et al. 2007). In this regard, the functionalist perspective is an ideal theoretical framework for investigating this issue (Keltner and Gross 1999). For instance, pride is an emotion that is typically associated with resisting temptations (Mukhopadhyay and Johar 2007). However, in the presence of a goal to be healthy, the experience of pride can result in a sense of accomplishment and redirect behavior towards indulgence (Wilcox et al. 2011). Happiness is an emotion that typically facilitates behavior geared towards self-improvement by increasing one's receptiveness to feedback (Raghunathan and Trope 2002). However, when a goal to manage one's mood is active, happiness can redirect behavior away from self-improvement (Fishbach and Labroo 2007). Envy, an emotion elicited from making unfavorable social comparisons with superior others, can increase impulsive behavior (Crusius and Mussweiler 2012). Yet, when a goal to perform is salient, envy can increase pursuit of the goal by improving task perseverance (van de Ven, Zeelenberg, and Pieters 2011). In each of these instances, discrete emotions are shown to have certain action tendencies that can become modified when paired with an active goal.

### **Limitations and Future Directions**

Our studies were not without limitations. In studies 1-3, the mediator was assessed after the measure of indulgent consumption. The issue of when the mediator should be measured is a challenge for many researchers. To illustrate this point, Iacobucci, Saldanha, and Deng (2007) examined two papers that reviewed the topic (Holland 1986; James, Mulaik, and Brett 1982) and found that 71.1% of the papers that measured an independent variable, mediator, and dependent variable took these measures simultaneously or out of order (e.g., mediator measured after the dependent measure). The primary concern for researchers, which was also the case for our research, is the potential for contamination effects resulting from the measurement of the mediator before the dependent variable. The mere measurement of the potential for harm of indulgence could have had an influence on indulgent consumption, and overridden our prior manipulations. Future research could possibly circumvent this issue by measuring the mediator at an implicit level, thereby capturing the process in its intended temporal sequence while maintaining the integrity of the goal and emotion manipulations.

Our research could also be used as a starting point for further exploring other aspects of the interaction between goals and emotions. For instance, in our studies, it is possible that the hedonic goal priming manipulations encouraged an affective experience. Related to this possibility, research has shown that priming emotions can influence people's behavior. For instance, Goldsmith, Cho, and Dhar (2012) showed that the semantic priming of guilt led to increased indulgence. While it is uncertain whether this increased indulgence was a result of the actual experience of guilt or the semantic

association people have with guilt, it speaks to the possibility of certain emotion primes being affectively relevant.

In addition, the current research focused primarily on hedonic goal pursuit, which, in the context of indulgent food consumption, always has a mix of both beneficial (i.e., it is tasty) and harmful (i.e., it is unhealthy) consequences. One possible extension of this research would be to explore whether the loss-preventing response of sadness would occur for the pursuit of goals that only have beneficial (harmful) consequences depending on the success (failure) of the goal. For instance, when one has an active impression management goal in a social interaction, there are beneficial (i.e., being well received by others) and harmful (i.e., being disliked by others) consequences of goal pursuit. It is hard to know if sadness would still create a loss-preventing response, and result in avoidance of the social interaction.

Finally, while our research shows that the temporal sequence of the hedonic goal and sadness interaction is critical to determining when sadness initiates versus modifies goal pursuit, the examination of the temporal interplay between other goals and emotions is largely unexamined. Through the investigation of how temporal dynamics influence other goals and emotions, our understanding of how these factors link together would improve and lead to a more systematic framework for understanding goal and emotion interactions. Future research could investigate these possibilities more closely.

## **Conclusion**

To conclude, we replicate prior findings that hedonic environmental cues can promote indulgence (Wadhwa, Shiv, and Nowlis 2008) and that sadness can create the need to regulate emotion through indulgent consumption (Garg and Lerner 2013; Tice et

al. 2001). However, we extend these findings by showing that hedonic environmental cues and sadness may not always encourage indulgent consumption. Rather, sadness can discourage the pursuit of a hedonic eating goal. By decreasing indulgent consumption, one adaptive consequence of sadness is to help consumers become healthier, which is consistent with functionalism and the idea that all emotions, regardless of valence, are useful (Keltner and Gross 1999). It would be naïve to suggest that consumers should actively seek out ways to persistently feel sad. Sadness is only relevant to a subset of goals and it has other negative consequences. However, we do believe that negative emotions are too often stigmatized as something that should not be experienced. Research has shown that both positive and negative emotions encourage adaptive responses, wherein each emotion serves a functional purpose in our day-to-day lives (Andrews and Thomson Jr. 2009; Tooby and Cosmides 2008). Thus, it is worth exploring conditions under which negative emotional experiences are beneficial.

**TABLE 2.1**  
**EMOTION PRETEST RESULTS**

	Pretest: Elicited Emotion							
	No emotion		Anger		Fear		Sadness	
	At Baseline	Post Induction	At Baseline	Post Induction	At Baseline	Post Induction	At Baseline	Post Induction
Emotion Ratings								
Anger	3.14 <sup>a1</sup> (2.39)	3.19 <sup>a1</sup> (2.68)	3.20 <sup>a1</sup> (2.21)	5.40 <sup>b2</sup> (2.48)	3.70 <sup>a1</sup> (2.68)	3.40 <sup>a1</sup> (1.85)	2.94 <sup>a1</sup> (2.13)	3.39 <sup>a1</sup> (2.36)
Fear	3.67 <sup>a1</sup> (2.01)	3.48 <sup>a1</sup> (2.48)	3.85 <sup>a1</sup> (2.48)	4.15 <sup>a1</sup> (2.66)	4.50 <sup>a1</sup> (2.16)	6.60 <sup>b2</sup> (1.57)	4.33 <sup>a1</sup> (2.91)	4.39 <sup>a1</sup> (2.48)
Sadness	2.81 <sup>a1</sup> (2.23)	2.67 <sup>a1</sup> (2.15)	3.45 <sup>a1</sup> (2.24)	3.20 <sup>a1</sup> (2.02)	4.20 <sup>a1</sup> (2.90)	4.35 <sup>a1</sup> (1.84)	3.22 <sup>a1</sup> (2.65)	5.83 <sup>b2</sup> (2.53)
Overall Mood	5.00 <sup>a</sup> (1.76)	5.67 <sup>a</sup> (2.11)	4.75 <sup>a</sup> (2.29)	3.40 <sup>b</sup> (1.73)	4.85 <sup>a</sup> (2.21)	3.70 <sup>b</sup> (1.92)	6.50 <sup>a</sup> (1.98)	3.83 <sup>b</sup> (2.31)
NOTES. Letter superscripts denote differences ( $p < .05$ ) between means in the same emotion condition.								
Number superscripts denote differences ( $p < .05$ ) between means within the same time measurement column.								
Standard deviations are in parentheses.								

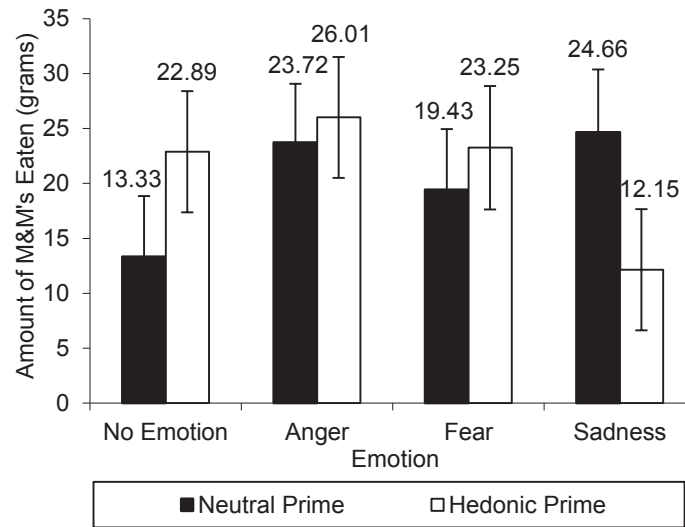
**TABLE 2.2**  
**STUDY SUMMARY STATISTICS**

		Study 1							
		No Emotion		Anger		Fear		Sadness	
		Neutral Prime	Hedonic Prime	Neutral Prime	Hedonic Prime	Neutral Prime	Hedonic Prime	Neutral Prime	Hedonic Prime
Consumption		13.33 <sup>a</sup>	22.89 <sup>b</sup>	23.72 <sup>a</sup>	26.01 <sup>a</sup>	19.43 <sup>a</sup>	23.25 <sup>a</sup>	24.66 <sup>a</sup>	12.15 <sup>b</sup>
		(11.34)	(16.68)	(16.27)	(15.77)	(15.14)	(16.02)	(15.98)	(14.85)
Potential Harm		4.63 <sup>a</sup>	3.77 <sup>a</sup>	3.38 <sup>a</sup>	3.43 <sup>a</sup>	4.07 <sup>a</sup>	3.55 <sup>a</sup>	3.93 <sup>a</sup>	5.57 <sup>b</sup>
		(2.74)	(2.80)	(2.47)	(2.60)	(2.28)	(2.68)	(2.14)	(2.70)
		Study 2							
		No Emotion				Sadness			
		Creativity Prime		Hedonic Prime		Creativity Prime		Hedonic Prime	
		Control	Felt Safety	Control	Felt Safety	Control	Felt Safety	Control	Felt Safety
Consumption		5.73 <sup>a</sup>	5.90 <sup>a</sup>	7.16 <sup>a</sup>	6.70 <sup>a</sup>	7.07 <sup>a</sup>	6.82 <sup>a</sup>	5.45 <sup>a</sup>	7.33 <sup>b</sup>
		(3.29)	(3.04)	(2.87)	(3.01)	(2.94)	(3.16)	(3.30)	(2.63)
Potential Harm		5.47 <sup>a</sup>	5.63 <sup>a</sup>	5.15 <sup>a</sup>	5.43 <sup>a</sup>	5.88 <sup>a</sup>	5.17 <sup>a</sup>	6.23 <sup>a</sup>	4.81 <sup>b</sup>
		(2.29)	(2.60)	(2.51)	(2.50)	(2.16)	(2.26)	(2.49)	(2.38)
		Study 3							
		No Emotion		Sadness					
		Before Emotion	After Emotion	Before Emotion	After Emotion				
Choice Share		66.7 <sup>a</sup>	61.8 <sup>a</sup>	42.4 <sup>a</sup>	79.2 <sup>b</sup>				
Potential Harm		4.30 <sup>a</sup>	4.80 <sup>a</sup>	5.63 <sup>a</sup>	4.58 <sup>b</sup>				
		(2.79)	(2.95)	(2.83)	(2.69)				
		Study 4							
		Neutral Prime		Hedonic Prime		Strong Hedonic Prime			
		No Emotion	Sadness	No Emotion	Sadness	No Emotion	Sadness		
Choice Share		46.4 <sup>a</sup>	64.4 <sup>b</sup>	65.5 <sup>a</sup>	47.3 <sup>b</sup>	82.5 <sup>a</sup>	29.8 <sup>b</sup>		

NOTES: In study 1, different superscripts denote differences ( $p < .05$ ) between means in the same emotion condition.  
 In study 2, different superscripts denote differences ( $p < .05$ ) between means in the same emotion and prime condition.  
 In study 3, different superscripts denote differences ( $p < .05$ ) between means in the same emotion and timing condition.  
 In study 4, different superscripts denote differences ( $p < .05$ ) between means in the same prime and emotion condition.  
 Standard deviations are in parentheses.

FIGURE 2.1

STUDY 1 RESULTS (ERROR BARS SHOW 95% CONFIDENCE INTERVALS)





**FIGURE 2.2**  
**ANCILLARY STUDY 1 RESULTS**

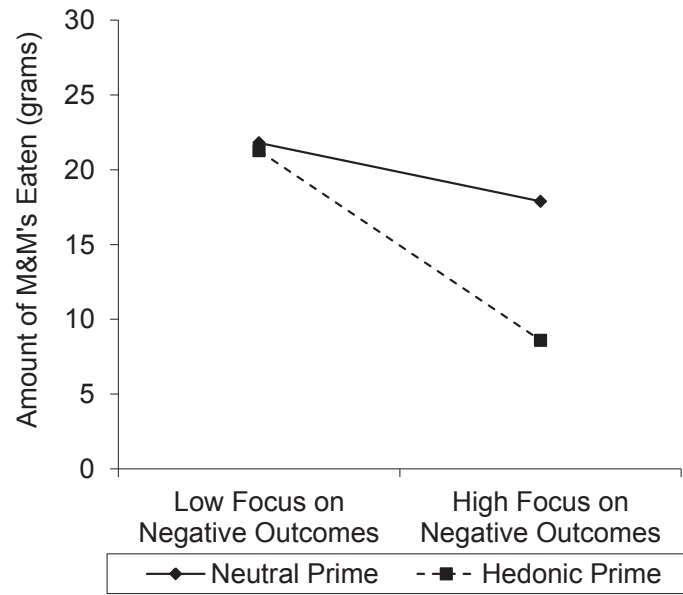
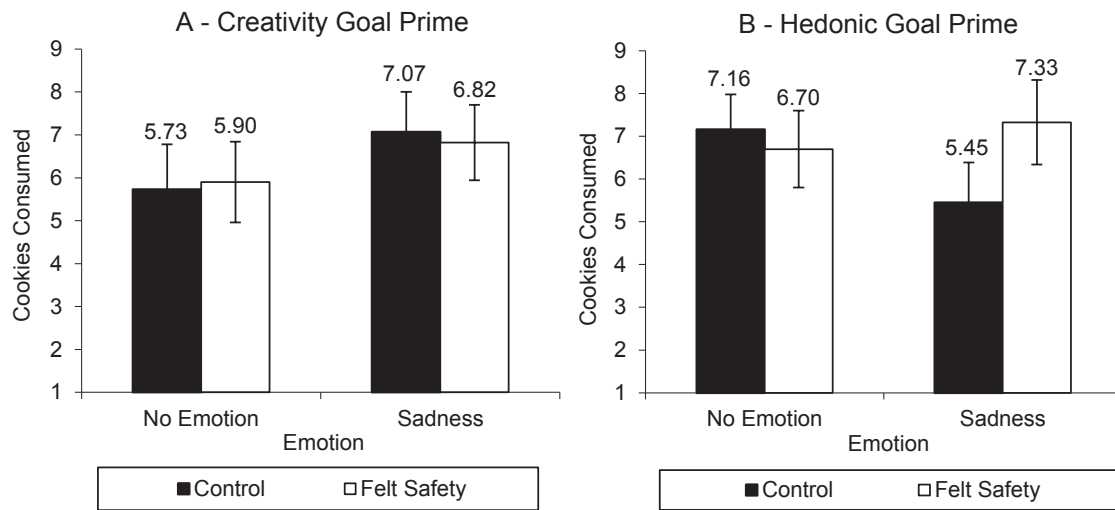
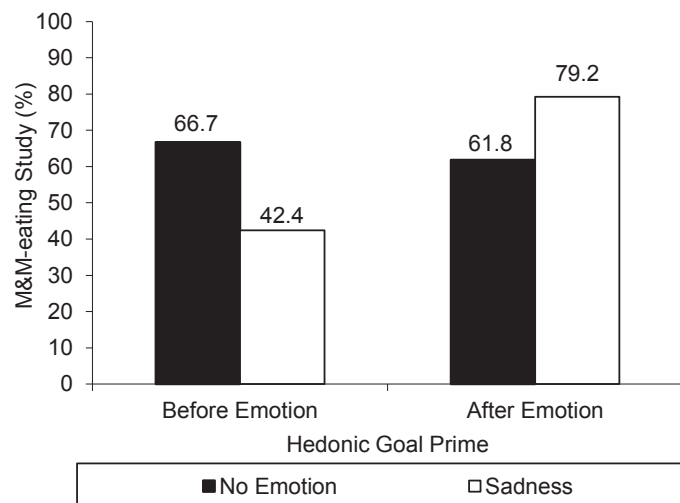


FIGURE 2.3

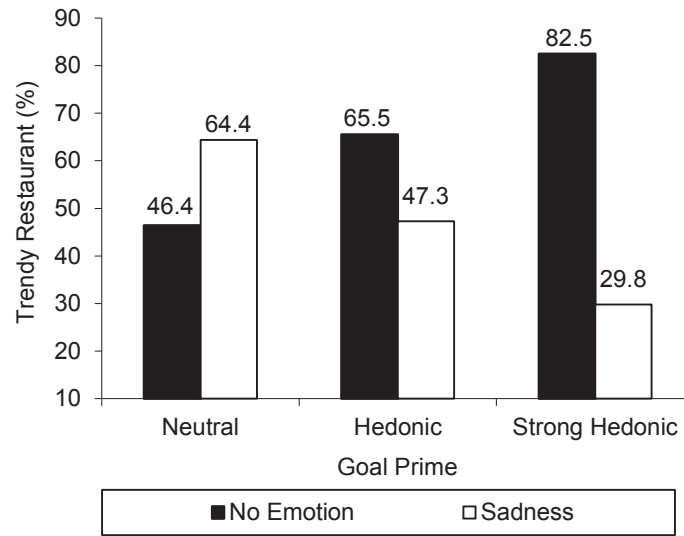
## STUDY 2 RESULTS (ERROR BARS SHOW 95% CONFIDENCE INTERVALS)



**FIGURE 2.4**  
**STUDY 3 RESULTS**



**FIGURE 2.5**  
**STUDY 4 RESULTS**



## **CHAPTER 3: GOAL ACTIVATION MODERATES THE INFLUENCE OF PRIDE ON REGULATORY BEHAVIOR**

### **OVERVIEW OF RESEARCH QUESTION**

Self-regulation refers to the ability to avoid short-term temptations in favor of behaviors that are more consistent with long-term goals. When consumers fail to regulate their behavior, the consequences can be quite serious and harmful. For instance, widespread failure to eat a proper diet has led to an obesity crisis in the United States, estimated to cost billions per year (Chandon and Wansink 2012). Credit card debt, a consequence of unfettered spending, limits consumers' ability to save for their retirement (Peñaloza and Barnhart 2011). Procrastination rates continue to rise, resulting in millions of hours of lost productivity per year (Steel 2007). Each of these examples illustrates the importance of understanding the determinants of (un)successful self-regulation.

To this effect, there is a large body of evidence showing that emotion experiences influence regulatory behavior (Andrade and Cohen 2007; Carver and Scheier 1998; Magen and Gross 2010). However, knowing when a discrete emotion will help versus hinder regulatory behavior is less understood. For example, pride increases indulgent behavior when it promotes a sense of achievement (Wilcox, Kramer, and Sen 2011), but decreases indulgent behavior when it focuses attention on the consequences of behavior (Patrick, Chun, and MacInnis 2009). Envy increases impulsive behavior when it encourages unfavorable social comparisons (Crusius and Mussweiler 2012), but discourages impulsive behavior when it increases the salience of a regulatory goal (Van de Ven, Zeelenberg, and Pieters 2011). Similar contrasting effects exist for anger (Denson et al. 2011; Tamir and Ford 2012), guilt (De Young et al. 2012; Giner-Sorolla

2001), sadness (Brown and McConnell 2011; Garg, Wansink, and Inman 2007), and happiness (Fishbach and Labroo 2007; Raghunathan and Trope 2002). Taken together, this research demonstrates that discrete emotions affect self-regulation, yet the manner in which a given emotion informs regulatory behavior appears to depend on other moderating factors.

The purpose of this research is to examine the experience of pride and provide a framework for understanding when it will encourage or discourage regulatory behavior. In doing so, we draw from research on self-conscious emotions to help explain why pride provides different types of information in different situations. We contend that pride either provides information about one's self-concept (how individuals see themselves) or provides information about progress on regulatory goals. When pride is experienced in the absence of a regulatory goal, pride serves as a source of information about one's self-concept. Additional regulatory behavior is a means of reinforcing the dimensions of the self-concept made salient by the pride. In contrast, when pride is experienced in the presence of a regulatory goal, pride serves as a source of information about progress toward the regulatory goal. Additional regulatory behavior is perceived as unnecessary given the progress toward the regulatory goal. Thus, pride encourages or discourages regulatory behavior as a consequence of the information it represents given the situation.

In the next section, we discuss research on self-conscious emotions in order to provide insight into why pride can communicate different types of information. We begin with an overview of self-conscious emotions and how they differ from basic emotions. Next, we provide an overview of how self-conscious emotions inform inferences about one's self-concept or one's regulatory goal progress. We then provide illustrations of how

each of these inferences can influence people's regulatory behavior. Finally, we apply these ideas to pride and develop hypotheses about how the experience of pride differentially influences regulatory behavior.

### **SELF-CONSCIOUS EMOTIONS**

Pride, embarrassment, empathy, envy, guilt, and shame are self-conscious emotions. Self-conscious emotions differ from other basic emotions in that their elicitation inherently results in self-evaluative thoughts (Lewis 2000; Tracy and Robins 2007). Tangney and Tracy (2012) outline the three key characteristics of self-conscious emotions. First, the self-evaluations that follow from the experience of a self-conscious emotion are directed at some aspect of the individual's sense of self. These assessments of the self can communicate information about who a person is (i.e., their self-concept) or what a person does (i.e., their goals) (Scheff 1990). Second, these self-evaluative thoughts lead to different inferences that guide a wide variety of regulatory behaviors (Giner-Sorolla 2001; Tracy, Robins, and Tangney 2007). Third, the manner in which any one self-evaluative thought influences regulatory behavior will depend on the situation. For example, self-evaluative thoughts have been found to typically inform decisions that support a person's self-concept, but can also inform decisions that support goal pursuit when regulatory goals that are important to the self become salient (Tracy and Robins 2007).

Self-evaluative thoughts can either confirm or disconfirm one's sense of self (Stets 2005). Perceptual control theory argues that when a positive emotion is experienced, it signals one's current and ideal self-standards are consistent with each

another (Stets and Asencio 2008). In contrast, when negative emotion is experienced, it signals that one's current and ideal self-standards are inconsistent with each another (Stets and Burke 2002). These inferences about the (in)consistency of one's current and idea self-standards have been shown to influence regulatory behavior. For instance, shame is an emotion that increases negative self-evaluations (Scheff 1990). Shame gives a person the sense that he is worthless, powerless, or exposed (Tangney and Tracy 2012). These negative self-evaluations lead to an inference that one has failed to meet the standards of an ideal self and does not deserve rewarding experiences. Consistent with this possibility, Giner-Sorolla (2001) found that shame decreased hedonic food consumption. Similarly, Tangney and Fischer (1995) found that shame led people to deprive themselves of enjoying the company of friends and family. In contrast, empathy increases positive self-evaluations (Tangney and Tracy 2012). Empathy gives a person the sense that he is highly valued by others (Batson et al. 1995). These positive self-evaluations encourage behaviors that are altruistic in nature and that foster warm, close interpersonal relationships (Eisenberg and Miller 1987; Feshbach 1987). For instance, Hoffman (2008) found that empathy increased volunteering and charitable behavior. Collectively, this research demonstrates that the self-evaluative thoughts brought on by self-conscious emotions can lead to inferences about one's self-concept and guide subsequent regulatory behavior.

When goals are salient, self-evaluative thoughts inform behaviors related to goal pursuit (Rebar and Conroy 2013; Tracy and Robins 2007). For instance, Zemack-Rugar, Corus, and Brinberg (2012) show that when people have a healthy eating goal, but frustrate the goal by eating indulgent foods, they experience guilt. Guilt leads to self-



evaluative thoughts that the person is at fault, incapable of doing the right thing, and a bad person (Tangney and Tracy 2012). These self-evaluative thoughts then decrease a person's perceived goal progress towards their regulatory goal which, in turn, encourages the avoidance of indulgent behaviors (Zemack-Rugar, Bettman, and Fitzsimons 2007). In contrast, Van de Ven et al. (2011) found that when students have an academic achievement goal, but are outperformed by a superior peer, they experience envy. Envy generates self-evaluative thoughts that the person is underperforming and lacking in achievement (Van de Ven, Zeelenberg, and Pieters 2012). As a result, these self-evaluative thoughts decreased the person's perceived academic goal progress and increased academic performance on a subsequent task. Thus, when a self-conscious emotion occurs in the presence of an active goal, its experience results in self-evaluative thoughts that can be used to make inferences about regulatory goal progress. In turn, these inferences about goal progress influence subsequent goal-directed behavior. In the next section, we apply these ideas to pride and make predictions about how pride might influence regulatory behavior.

### **PRIDE AND SELF-REGULATION**

Pride is a positive self-conscious emotion that is experienced from accomplishments in domains that are important and self-relevant to the individual (Tracy and Robins 2007). Pride can be a function of one's personal accomplishments (what I have accomplished) or what other people have accomplished (what a friend, family member, or significant other has accomplished). Pride is accompanied by positive self-evaluative thoughts, which validate the individual by providing a sense of skillfulness,

self-efficacy, and success at meeting one's self-standards (Horberg, Kraus, and Keltner 2013; Williams and DeSteno 2008). In addition, the self-evaluative thoughts that accompany pride commonly arise from accomplishments in self-regulatory domains such as eating, saving, or academics (Wilcox et al. 2011). However, research has shown that it is not always clear how these pride-based self-evaluative thoughts will influence subsequent regulatory behavior.

Pride has been shown to encourage and discourage regulatory behavior. For example, Patrick et al. (2009) found that participants ate less cake when they were asked to anticipate the pride they would feel if they resisted eating a cake. The anticipation of pride from resisting consumption of the cake made thoughts of meeting one's self-standard more accessible, which reduced consumption. In addition, Williams and DeSteno (2008) showed that when people performed a task believed to measure their cognitive capabilities, positive feedback elicited feelings of pride, which reinforced subsequent task perseverance. In contrast, Wilcox et al. (2011) found that when people perceived pride as relevant to a health goal, it promoted a sense of achievement and licensed people to indulge (e.g., choose French fries over a salad). Thus, sometimes pride seems to strengthen regulatory behavior and yet, in other instances, it leads people to feel that additional regulatory behavior is not necessary.

We propose that the conflicting influence of pride on regulatory behavior may be a consequence of the activation of regulatory goals. Figure 3.1 illustrates our hypotheses about how pride will influence regulatory behavior as a function of regulatory goal activation. When pride is experienced, it generates self-evaluative thoughts that lead to different inferences depending on one's regulatory goal state. When a regulatory goal is

not active, pride will lead people to increase their regulatory behavior. This occurs because pride leads people to make inferences about their self-concept. Related to this possibility, Wheeler, DeMarree, and Petty (2007) provide a theory which describes the active self-concept as a dynamic processing system which responds to salient environmental features that are relevant to one's sense of self. One of the means by which the self-concept may change is from the experience of different emotions. Recall that pride occurs in response to achievements in domains that are important and self-relevant to the individual. This generates self-evaluations that signal to the individual that they are meeting their ideal self-standard (Stets 2005; Stets and Asencio 2008). Pride also communicates a sense of stability in terms of reaffirming the individual's beliefs as to the traits they possess as a person (e.g., "I am a regulated person"). This sense of stability is reinforcing and motivates people to seek future achievements and pursue behaviors in domains that are likely to bring about further feelings of pride (Coleman and Williams 2013; Markus and Wurf 1987; Tangney and Tracy 2012). The implication is that pride and self-regulation can be mutually reinforcing, in that pride encourages additional regulatory behavior which, in turn, promotes pride.

However, there are times in which regulatory goals are active at the time pride is experienced (i.e., information in the environment makes a regulatory goal salient). When this occurs, pride decreases regulatory behavior owing to its ability to instill inferences of goal progress towards the regulatory goal. This prediction derives from the fact that goal activation is a temporary state that relies on diagnostic feedback for control (van Osselaer and Janiszewski 2012). Once a goal is active, people search the environment for relevant information that can be used to guide subsequent goal-directed behavior (Louro, Pieters,

and Zeelenberg 2007). While goal pursuit typically relies on objective information, recent research has shown that subjective information, such as emotion, can also influence goal pursuit (Albarracin and Hart 2011; Louro et al. 2007). For example, Labroo and Patrick (2009) found that when an academic goal was active, a negative mood decreased people's goal pursuit. Alternatively, Trope, Igou, and Burke (2006) discuss evidence that people are more likely to work towards a goal when they experience positive mood. In both cases, emotions influenced goal pursuit despite the lack of objective evidence about goal performance. In the case of pride, the self-evaluations that follow its experience signal that the individual is meeting the regulatory goal standard. This subsequently leads to inferences of progress towards the regulatory goal which then decreases regulatory behavior. As a result, the influence of pride on regulatory behavior depends on whether a regulatory goal is active and what inferences are generated.

A set of five studies test the hypothesis that the effect of pride on regulatory behavior depends on the absence/presence of a regulatory goal. Study 1 provides evidence for the ability of pride to increase or decrease regulatory behavior. Study 2 shows that the ability of pride to signal information can be attenuated when the self-evaluative thoughts that result from its experience are considered to be irrelevant. Study 3 provides a direct test of the proposed mechanisms responsible for pride increasing or decreasing regulatory behavior, while examining whether thinking about one's self or one's goals, without an accompanying sense of pride, produces the same effects on self-regulation. Study 4 sheds additional light on whether pride's ability to increase regulatory behavior is a consequence of inferences of one's self-concept or an alternative process (i.e., goal commitment). Study 5 shows how feeling proud of the achievement of a family

member attenuates the influence of pride on goal progress inferences but not self-concept inferences. Together, the five studies show that pride is a multifaceted emotion that has the potential to shape regulatory behavior according to the situation.

## STUDY 1

Study 1 investigated the influence of pride on people's regulatory behavior when a self-regulatory goal was active (i.e., salient) or not. A general self-regulatory goal was primed using a lexical decision task. Pride was induced through the use of a scenario-based writing task. Self-regulation was assessed through a decision task that presented participants with the opportunity to engage in a number of regulatory behaviors. We predicted that when a self-regulatory goal was not active, participants feeling pride would be more likely to identify self-regulatory means as an opportunity to remain consistent with their self-concept, which would increase regulatory behavior. In contrast, when a self-regulatory goal was active, we anticipated that participants feeling pride would perceive a greater sense of progress towards the goal and this would decrease regulatory behavior.

### Method

*Participants and Design.* Participants were 136 members of an online panel (Mechanical Turk, 53% female,  $M_{Age} = 35.17$ ). This was the final sample after exclusion criteria was applied, where six participants were excluded for failing to follow instructions and one was excluded for having taken a similar study about pride before. These criteria were applied to all studies in this paper, resulting in a similar percentage of

exclusions, and will not be discussed further. The design was a 2 (regulatory goal: inactive vs. active) x 2 (emotion: no emotion vs. pride) between-subjects design.

*Procedure.* Participants were told that there were three studies in the session, unrelated and pooled together out of convenience. The first study was ostensibly intended to determine people's attention capabilities, but truthfully was a lexical decision task that served as the goal priming manipulation. Participants were told to focus their attention on a fixation point (X) on the computer screen, which would be replaced by a letter string. They should press "nine" on the keyboard if the letter string was a word and "one" if it was not, responding as quickly as possible. After five practice trials, participants were given seven target trials that varied depending on condition. Participants in the inactive self-regulatory goal condition were shown neutral words (computer, flower, refrigerator, notebook, picture, silk, next), while participants in the active self-regulatory goal condition were shown words associated with being regulated (regulate, health, persistence, willpower, strive, control, virtue). Each participant saw the target words twice, along with five filler words, and 25 nonwords. The trial order was random.

The second study consisted of a writing task and served as the manipulation of emotion. In the no emotion condition, the instructions stated that the researchers were interested in the everyday experiences. Participants were then asked to write about a typical day. In the pride condition, participants read instructions about the researchers wanting to learn about specific experiences that make people feel a sense of pride. Participants were then asked to write about recurrent past experiences in which they made healthy eating decisions and how this accomplishment made them proud. In both conditions, participants were asked to spend a few minutes writing a response that was

vivid enough so that a person not present during the events could read their description and know exactly how they felt.

The third study was purportedly related to learning about people's everyday decisions but was actually the dependent measure for regulatory behavior. The instructions stated that people make a large number of choices each day, and that many of these choices are made very quickly. Participants were told to act as if they were making their decisions in real time and to decide as quickly as possible. To emulate the types of decisions people are confronted with on a typical day, participants made 15 total decisions, such that five decisions were said to be made in the morning, five in the afternoon, and five in the evening. The order of the decisions within each part of the day was randomly presented. For each decision, there were two possible options to select and their order was randomly presented. An example of a morning decision was, "What will you do? Get an early start or sleep in?" An example of an afternoon decision was, "It is towards the end of the afternoon, what do you decide to do? Exercise or relax?" An example of an evening decision was, "You are eating a delicious dinner and there is a half-serving left. What would you do? Save it for tomorrow or eat it now?" Thus, in each decision, one of the options was a more regulated behavior than the other. After making their choices, participants answered a few demographic questions, and were extensively debriefed for suspicion. No participant guessed the real purpose of the study or how the goal priming and emotion task could jointly have influenced their choices.

## **Results**

*Pretest of Emotion Manipulations.* To verify the efficacy of the emotion manipulations, a pretest ( $N = 43$ ) was conducted with participants recruited from the

same population as that of the main study. The design was a one-factor, between-subjects manipulation of emotion (no emotion vs. pride), where participants went through the emotion inductions from the main study and then indicated the extent to which they felt pride on a nine-point scale (1 - Not at all, 9 - A great deal). Validating the emotion manipulation, participants in the pride condition felt more pride ( $M = 6.87$ ) than in the no emotion condition ( $M = 5.35$ ;  $t(41) = -2.62, p = .01$ ).

*Regulatory Behavior.* To calculate each participant's level of regulatory behavior, a self-regulatory choice score was computed by coding each regulatory (nonregulatory) choice as one (zero), and then summing these choice codes across the 15 decisions. An analysis of variance (ANOVA) on the choice score revealed an interaction between regulatory goal and emotion ( $F(1, 132) = 14.07, p < .01$ ; see fig. 3.2). In the inactive regulatory goal condition, participants were more likely to make regulatory choices in the pride condition ( $M = 9.32$ ) than in the no emotion condition ( $M = 7.59$ ;  $F(1, 132) = 7.11, p < .01$ ). This provides evidence that when no regulatory goal is accessible, pride increases regulatory behavior. In the active regulatory goal condition, participants made a lower number of regulatory choices in the pride condition ( $M = 7.45$ ) than in the no emotion condition ( $M = 9.09$ ;  $F(1, 132) = 6.96, p < .01$ ). This provides support for the hypothesis that when a regulatory goal is accessible, pride decreases regulatory behavior. Finally, in the no emotion condition, participants made a greater number of regulatory choices in the active than in the inactive regulatory goal condition ( $F(1, 132) = 5.52, p < .05$ ). This result verifies the efficacy of the regulatory goal priming manipulation.



## **Discussion**

The results of study 1 demonstrate that the absence or presence of a self-regulatory goal moderates the influence of pride on regulatory behavior. When no self-regulatory goal was salient, pride increased regulatory behavior, presumably a result of the inference that self-regulating is a means of remaining consistent with one's self-concept. When a self-regulatory goal was salient, pride decreased regulatory behavior, presumably a result of the inference that enough progress had been made toward the regulatory goal. The results demonstrate that the information signaled by pride is dependent upon a person's goal state and is critical to determining pride's influence on regulatory behavior. Study 2 investigates situations in which the influence of pride on regulatory behavior is attenuated.

## **STUDY 2**

The results of study 1 are consistent with the hypotheses that self-evaluative thoughts influence a person's inferences about one's self-concept, in the absence of a regulatory goal, or goal progress, in the presence of a regulatory goal. In turn, these inferences influence regulatory behavior. Yet, a critic might argue that the study 1 design only shows that the presence of pride, not self-evaluative thoughts that result from pride, alter regulatory behavior. One way to address this criticism is to vary whether or not a person considers self-evaluative thoughts relevant to a decision. If we instruct a participant not to consider self-evaluative thoughts, and doing so alters regulatory behavior, then we would have more confidence that self-evaluative thoughts were instrumental in the study 1 results. Specifically, the results of study 1 should replicate

when there was no mention of the relevance of self-evaluative thoughts but should dissipate when the self-evaluative thoughts were considered irrelevant, leaving only an effect of regulatory goal activation.

## **Method**

*Participants and Design.* Participants were 321 undergraduate students (62% female,  $M_{\text{Age}} = 20.91$ ) who participated in exchange for course credit. Participants were randomly assigned to one of eight conditions in a 2 (relevance of self-evaluative thoughts: high vs. low) x 2 (regulatory goal: inactive vs. active) x 2 (emotion: no emotion vs. pride) between-subjects design.

*Procedure.* Participants were told that they would participate in four unrelated studies. The first study used the same priming task from study 1, but changed the goal to savings. Participants in the active regulatory goal condition were shown words associated with saving money (cheap, price, save, economic, frugal, bargain, value). The second study contained the same emotion manipulations from study 1.

The third study purportedly measured people's ability to infer the full meaning of a passage after reading a short excerpt. Participants were instructed that they would read an excerpt from a recent newspaper article and then be asked to infer the full meaning of the passage. In truth, this task served as the manipulation of the relevance of self-evaluative thoughts. In the high relevance condition, participants read an excerpt about a new bird exhibit to be put on display at the local zoo. The content in this condition was intentionally kept neutral. In the low relevance condition, participants read an excerpt about a new book that highlighted the need to distinguish actions. Within the excerpt, the author cautioned readers that people should "not use their successes in one area of their

lives to infer what they should do in other areas,” and to “take inventory by looking at each domain separately, rather than collectively, in order to assess what actions should be taken.” The expectation was that for the people who experienced pride, they would no longer use self-evaluative thoughts as a source of information for guiding subsequent behavior. After reading the excerpt, participants summarized the excerpt and answered two questions about how interesting it was and how important newspapers are in this day and age.

In the fourth study, participants read that the researchers were interested in students’ budgeting habits. Participants were instructed to imagine that they were putting together a budget for the upcoming month. Participants began by indicating the actual amount of disposable income they had each month, and were asked to indicate the amount of their income that they intended to save for the upcoming month. The amount of money saved served as the dependent measure of regulatory behavior. After indicating their saving intentions, participants were asked a few demographic questions and what they thought was the true purpose of each study before being debriefed and thanked for their time.

## **Results**

*Regulatory Behavior.* An analysis of covariance (ANCOVA) on the amount of money saved revealed a three-way interaction of the relevance of self-evaluative thoughts, regulatory goal, and emotion factors ( $F(1, 312) = 7.07, p < .01$ ), with disposable income added as a covariate ( $F(1, 312) = 22.10, p < .01$ ). In the high relevance condition, the analysis revealed an interaction between the regulatory goal and emotion factors ( $F(1, 312) = 13.36, p < .01$ ; see fig. 3.3A). In the inactive regulatory goal

condition, participants were more willing to save in the pride ( $M = \$154.17$ ) than in the no emotion condition ( $M = \$93.76$ ;  $F(1, 312) = 4.66, p < .05$ ). In the active regulatory goal condition, participants were less willing to save in the pride ( $M = \$90.81$ ) than in the no emotion condition ( $M = \$149.24$ ;  $F(1, 312) = 7.36, p < .01$ ). In addition, within the no emotion condition, participants were more willing to save in the active than inactive regulatory goal condition ( $F(1, 312) = 4.68, p < .05$ ). These results replicate those of study 1.

In the low relevance condition, as predicted, the analysis revealed a nonsignificant interaction ( $F < 1$ ) and a main effect of regulatory goal ( $M_{\text{Active}} = \$122.18, M_{\text{Inactive}} = \$81.77$ ;  $F(1, 312) = 9.05, p < .01$ ; see fig. 3.3B). These results demonstrate that once participants were encouraged to discount the relevance of the self-evaluative thoughts, pride no longer had an influence on regulatory behavior. Instead, behavior was determined by the salience of the regulatory goal.

## **Discussion**

The results of study 2 provide further evidence that self-evaluative thoughts influence a person's inferences about one's self-concept or, in the presence of a regulatory goal, goal progress. Self-evaluative thoughts influenced regulatory behavior, but only to the extent they were considered relevant. When the self-evaluative thoughts were considered irrelevant, the participant was discouraged from making inferences based on these thoughts. Instead, participants behaved in accordance with the activation level of a regulatory goal.

### STUDY 3

Study 3 had two objectives. First, we wanted to provide additional evidence that pride was instrumental in influencing regulatory behavior. We were concerned that merely thinking about one's self-concept or about one's goal progress could influence regulatory behavior, independent of the experience of an emotion. To test this possibility, we included conditions that had people think about themselves, or their goals, without feeling pride. We expected that regulatory behavior would only be influenced by the presence or absence of a self-regulatory goal, as there would be no self-evaluative thoughts. Self-evaluative thoughts should influence self-concept and one's goal progress perceptions only when there was an experience of pride.

Second, we wanted to provide additional evidence that inferences about one's self-concept or about one's goal progress were influencing regulatory behavior. To support this hypothesis, we added measures of the intent to remain consistent with one's self-concept and one's progress toward a regulatory goal. We anticipated that these processes would mediate regulatory behavior when pride was present, but not when pride was absent.

#### **Method**

*Participants and Design.* Participants were 377 undergraduate students (41% female,  $M_{\text{Age}} = 19.80$ ) who participated in exchange for course credit. Participants were randomly assigned to one of eight conditions in a 2 (regulatory goal: active vs. inactive) x 4 (emotion: no emotion/control, no emotion/self, no emotion/goal, pride) between-subjects design.

*Procedure.* Participants were told that the session consisted of three unrelated studies. The first study was used as a vehicle for priming the self-regulatory goal of being healthy, that was adapted from Fishbach and Labroo (2007). Participants were told that the researchers were interested in undergraduate students' activities. Participants in the inactive regulatory goal condition listed sources they used to receive the news. Participants in the active regulatory goal condition listed activities they performed to be healthy.

The second study once again consisted of a writing task and served as the manipulation of emotion. In the no emotion conditions, participants were asked to write about a typical day. However, there were slight differences in the instructions depending on condition. In the no emotion/control condition, the instructions were identical to study 1. In the no emotion/self condition, participants were asked to write about the "typical things you do throughout the day that represent who you are as a person." In the no emotion/goal condition, participants were asked to write about the "typical things you do throughout the day that represent the different goals you have." In the pride condition, the instructions were similar to study 1. The instructions still stated that the researchers wanted to learn about specific experiences that make people feel a sense of pride. However, the accomplishment people wrote about was no longer specific to the health domain. Instead, participants were asked to write about an accomplishment that has always made them feel proud.

After completing the writing task, participants moved on to a third study that was supposedly related to learning about consumer preferences, but was actually a measure of regulatory behavior (dependent measure). The instructions stated that the purpose of the

study was to get a sense of people's preferences for various food items. Participants then viewed 10 pairs of food items and made a choice. Each pair of food items included one healthy option (i.e., apple, salad, almonds) and one indulgent option (i.e., chocolate bar, Doritos chips, brownies). The order of the food pairs was randomly presented. After making their choices, participants were asked to indicate the extent to which they felt that "being a highly regimented person is just part of who I am" (1 - Strongly disagree, 9 - Strongly agree). This served as the measure of perceptions of self-concept consistency. Participants were also asked to indicate "how much progress do you currently feel you have made towards healthy eating" (1 - Very little, 9 - A great deal). This served as the measure of perceptions of regulatory goal progress. Finally, participants answered a few demographic questions, were debriefed, and thanked for their time.

## Results

*Pretest of Emotion Manipulations.* To verify the efficacy of the emotion manipulations, a pretest ( $N = 79$ ) was conducted. The design was a one-factor, between-subjects manipulation of emotion (emotion: no emotion/control, no emotion/self, no emotion/goal, pride), where participants went through the emotion inductions from the main study and then responded to the same pride question from the emotion pretest in study 1. There was an effect of the emotion manipulation on feelings of pride ( $F(3, 75) = 5.37, p < .01$ ). Validating the emotion manipulation, participants in the pride condition felt more pride ( $M = 7.71$ ) than the no emotion/control ( $M = 5.30; F(1, 75) = 15.81, p < .01$ ), no emotion/self ( $M = 5.96; F(1, 75) = 10.64, p < .01$ ), and no emotion/goal conditions ( $M = 6.13; F(1, 75) = 8.96, p < .01$ ).

*Regulatory Behavior.* To calculate each participant's level of regulatory behavior, we computed a self-regulatory choice score by coding each healthy (indulgent) food choice as one (zero), and then summing these choice codes across the 10 decisions. An ANOVA revealed an interaction between the regulatory goal and emotion factors ( $F(3, 369) = 6.37, p < .01$ ; see fig. 3.4). In the inactive regulatory goal condition, participants were more likely to make healthy choices in the pride condition ( $M = 6.55$ ) than in the no emotion/control condition ( $M = 5.42$ ;  $F(1, 369) = 6.09, p < .05$ ). In contrast, participants in the no emotion/self ( $M = 5.31$ ;  $F < 1$ ), and no emotion/goal conditions ( $M = 5.25$ ;  $F < 1$ ) were not more likely to make healthy choices than the no emotion/control condition. These results show that simply thinking about one's self or one's goals does not have the same effect as pride in terms of increasing regulatory behavior. In the active regulatory goal condition, participants were less likely to make healthy food choices in the pride condition ( $M = 5.27$ ) than in the no emotion/control condition ( $M = 6.37$ ;  $F(1, 369) = 6.69, p = .01$ ). In contrast, participants in the no emotion/goal ( $M = 6.46$ ;  $F < 1$ ), and no emotion/self conditions ( $M = 6.23$ ;  $F < 1$ ) were as likely to make healthy choices as the no emotion/control condition. These results show that when a regulatory goal is active, thinking about one's goals or one's self does not lead to the same decreases in regulatory behavior as pride. Finally, participants made more healthy food choices in the active compared to inactive regulatory goal condition for the no emotion/control ( $F(1, 369) = 4.33, p < .05$ ), no emotion/self ( $F(1, 369) = 4.29, p < .05$ ), and no emotion/goal conditions ( $F(1, 369) = 7.59, p < .01$ ). These results show that thinking about one's self or one's goals, without an accompanying sense of pride, will not modify people's regulatory behavior beyond the influence of an active regulatory goal.



*Mediation Analyses.* An ANOVA on the self-concept perception item revealed an interaction between regulatory goal and emotion ( $F(3, 369) = 2.68, p < .05$ ). In the inactive regulatory goal condition, participants were more likely to see being healthy as part of who they were in the pride condition ( $M = 6.45$ ) than in the no emotion/control condition ( $M = 5.21; F(1, 369) = 7.67, p < .01$ ). However, participants in the no emotion/self ( $M = 5.00; F < 1$ ), and no emotion/goal conditions ( $M = 5.43; F < 1$ ) did not differ from the no emotion/control condition in their level of self-concept consistency. In contrast, in the active regulatory goal condition, participants were no longer more likely to indicate a greater level of self-concept consistency in the pride condition ( $M = 5.62$ ) compared to the no emotion/control condition ( $M = 5.53; F < 1$ ). The same observation was found when comparing the no emotion/self ( $M = 5.65; F < 1$ ), and no emotion/goal conditions ( $M = 5.09; F(1, 369) = 1.26, p > .25$ ) to the no emotion/control condition. These results demonstrate that in the absence of an active regulatory goal, pride leads people to remain consistent with one's self-concept, while thinking about one's self or one's goals does not.

An ANOVA on the goal progress perception item revealed an interaction between regulatory goal and emotion ( $F(3, 369) = 2.77, p < .05$ ). In the active regulatory goal condition, participants were more likely to perceive making progress towards the goal in the pride condition ( $M = 6.64$ ) than in the no emotion/control condition ( $M = 5.82; F(1, 369) = 4.64, p < .05$ ). Conversely, participants in the no emotion/goal ( $M = 5.80; F < 1$ ), and no emotion/self conditions ( $M = 5.40; F(1, 369) = 1.19, p > .25$ ) did not differ from the no emotion/control condition in terms of perceived goal progress. In contrast, in the inactive regulatory goal condition, participants did not indicate higher goal progress

perceptions in the pride ( $M = 5.60$ ), no emotion/goal ( $M = 5.47$ ), or no emotion/self conditions ( $M = 6.02$ ) compared to the no emotion/control condition ( $M = 5.77$ ; all  $F_s < 1$ ). These results demonstrate that in the presence of an active regulatory goal, pride leads people to perceive greater progress towards the regulatory goal, while thinking about one's self or one's goals does not.

We predicted that the effect of pride on regulatory behavior should depend on the presence or absence of a self-regulatory goal. When no regulatory goal is active, pride should increase regulatory behavior and be mediated by perceptions of self-concept consistency. When a regulatory goal is active, pride should decrease regulatory behavior and be mediated by perceptions of goal progress. We tested this prediction by conducting a moderated mediation analysis using model 8 in PROCESS (Hayes 2013), with emotion as our predictor variable, regulatory goal as our moderating variable, perceptions of self-concept consistency and goal progress as the mediators, and number of healthy food choices as the outcome variable. PROCESS allows for the estimation of indirect effects of multiple mediators but can only analyze two levels of a categorical predictor variable at a time. Given that the no emotion conditions did not differ in self-concept or goal progress perceptions, the moderated mediation analysis was performed using a dummy predictor variable that coded the pride condition as one and the no emotion conditions as zero. In support of our hypotheses, the emotion by regulatory goal interaction predicted self-concept ( $\beta = -1.04, p < .05$ ) and goal progress perceptions ( $\beta = 1.11, p < .05$ ). When no regulatory goal was active, the emotion factor to regulatory behavior through self-concept perceptions (indirect effect) was significant and did not include zero (indirect effect = .15; 95% CI: .02 to .37), which supports mediation. However, the indirect effect

through goal progress perceptions was not significant and included zero (indirect effect = .02; 95% CI: -.07 to .17). In contrast, when a regulatory goal was active, the indirect effect through goal progress perceptions was significant (indirect effect = -.14; 95% CI: -.33 to -.03), while self-concept perceptions were not (indirect effect = .02; 95% CI: -.04 to .16).

## **Discussion**

Study 3 provides a number of additional insights for understanding when and how pride influences regulatory behavior. The results indicate that when no self-regulatory goal is active, pride can increase regulatory behavior as a result of perceptions of remaining consistent with one's self-concept, but not perceptions of goal progress. The results also show that when a self-regulatory goal is active, pride can decrease regulatory behavior as a result of perceptions of goal progress, but not perceptions of self-concept consistency. Importantly, the results also show that when a self-regulatory goal is (is not) active, simply thinking about one's self (one's regulatory goals), without the accompanying experience of pride, does not lead to the same increase (decrease) in regulatory behavior. This shows that the experience of emotion is critical to generating changes in people's regulatory behavior.

Study 3 provided evidence for the underlying processes responsible for the effect of pride on regulatory behavior. In the final two studies, we examine additional factors that provide greater insight into each of these processes, while examining whether goal commitment plays a role in the influence of pride on regulatory behavior. Specifically, study 4 explores the alternative hypothesis that goal commitment, not self-concept perceptions, is responsible for increased regulatory behavior resulting from pride when a

self-regulatory goal is not active. Study 5 examines whether experiencing pride in response to a family member's achievement attenuates the goal progress perception of pride when a self-regulatory goal is active. Examining these potential boundary conditions should help further illuminate the mechanisms by which pride influences regulatory behavior.

#### **STUDY 4**

We have argued that when regulatory goals are inactive, pride increases regulatory behavior because it encourages behavior that is consistent with one's self-concept. One challenge to this hypothesis is the possibility that pride increases regulatory behavior through an expressed commitment to one's regulatory goals. While at first glance, goal commitment and perceptions of one's self-concept may seem like interchangeable constructs, there are several important research findings that highlight their nuances. First, goal commitment is the consequence of an individual making the conscious decision to put forth the effort required to pursue a desired end state that is not yet reached (Etkin and Ratner 2012; Koo and Fishbach 2010). However, when pride is experienced, its self-evaluations signal that the person is already meeting their ideal standard, and pursuit occurs because it represents an opportunity to remain consistent with their ideal self (i.e., to remain skillful and self-efficacious). Supporting this distinction, Passyn and Sujon (2012) found that pride increased regulatory behavior when the task was framed as being based on skill (i.e., an indicator of one's self-concept) but not when framed as being based on effort (i.e., an indicator of goal commitment). Second, goal commitment is specific to an active goal. In defining goal commitment,

Fishbach and Dhar (2005) state that “an action toward a certain goal is seen as increasing the commitment to actions that favor the same goal.” For instance, an action towards losing weight signals commitment toward the continued pursuit of a weight loss goal. Assessments of one’s self-concept do not have to be goal-specific. An action towards losing weight signals a positive self-concept, which may transfer to an array of self-regulatory goals, such as saving money, working hard, and being organized. The implication is that self-concept perceptions have the potential to span multiple self-regulatory domains while commitment cannot. Third, the goal commitment literature has operationalized pride as a consequence of goal pursuit (e.g., excelling in mathematics; Oettingen, Pak, and Schnetter 2001), while we will investigate the role of pride as an antecedent to goal pursuit. Collectively, this research suggests that there may be important differences in how commitment and self-concept perceptions influence regulatory behavior.

Study 4 tested these possible differences between commitment versus self-concept perceptions, deviating from the prior studies in three important ways. First, the study included a pride and commitment condition, with both manipulations centered on healthy eating. Second, to explore the possibility that commitment versus self-concept perceptions differ in their ability to influence regulatory behavior across multiple self-regulatory domains, we also manipulated the type of regulatory behavior participants had the opportunity to engage in. Depending on condition, participants either had the opportunity to self-regulate in the domain specific to the elicitation of commitment or pride (i.e., healthy eating) or the opportunity to self-regulate more generally (i.e., regulated behaviors other than healthy eating). We expected that commitment towards

healthy eating would increase regulatory behavior when the self-regulatory domain was healthy eating but not for other domains. If pride simply acts as a commitment device to the domain that elicited the pride, its experience should lead to a similar pattern as commitment. However, if pride elicits self-evaluative thoughts that serve as a source of information about one's self-concept, its experience should lead people to self-regulate regardless of whether the self-regulatory domain is specific to healthy eating or not. Finally, to provide additional evidence for the underlying mechanisms responsible for pride influencing regulatory behavior, measures of commitment, self-concept perceptions, and goal progress perceptions were included that referred specifically to the domain of healthy eating and also to self-regulation irrespective of domain.

## **Method**

*Participants and Design.* Participants were 265 undergraduate students (63% female,  $M_{\text{Age}} = 21.89$ ) who participated in exchange for course credit. Participants were randomly assigned to one of six conditions in a 3 (disposition: no emotion, pride, commitment) x 2 (self-regulatory domain: specific vs. general) between-subjects design. No regulatory goal was made active.

*Procedure.* Participants were told that they would take part in two unrelated studies. The first study consisted of a writing task. In the no emotion condition, participants completed the same writing task from study 1 that centered on a typical day. In the pride condition, participants completed the same writing task from study 1 that asked to write about recurrent past experiences in which they made healthy eating decisions and how proud they felt. In the commitment condition, the structure was similar to the pride condition except that participants were asked to write about instances in

which they committed to healthy eating decisions and how this commitment influenced their eating. Thus, in both the pride and commitment conditions, participants were asked to write about healthy eating but from different perspectives. In the commitment condition, participants focused on what is necessary to pursue a desired end state (i.e., eating healthy), whereas the pride condition had participants focused on the consequence of reaching a desired end state (i.e., achievement).

The second study served as the dependent measure for regulatory behavior. However, the type of regulatory behavior participants had the opportunity to engage in differed by condition. In the specific domain condition, participants had the opportunity to engage in regulatory behavior geared explicitly towards healthy eating, using the same consumer preference task from study 3. In the general domain condition, participants were given the opportunity to engage in other regulatory behaviors that were not specifically geared towards healthy eating. Specifically, participants completed a modified version of the everyday decisions task from study 1, such that the number of decisions participants had to make was reduced to 10 and all food-related choices were removed. So both domain conditions were similar in that they had participants make 10 choices. However, they differed in that the specific domain condition looked only at regulatory behavior in the food domain, while the general domain condition looked at regulatory behaviors outside of the food domain.

After making their choices, participants were asked to answer a few personality and demographic questions which contained our measures for commitment, perceptions of self-concept consistency, and perceptions of goal progress for both the self-regulatory domain of healthy eating and for self-regulation across domains. Specifically, participants

were asked to indicate “how committed do you currently feel towards healthy eating” and “how committed do you currently feel towards self-control” (1 - Not at all committed, 9 - Very committed). These items served as the measures of commitment towards healthy eating and general self-regulation respectively. We expected that commitment to healthy eating (but not commitment towards general self-regulation) would mediate the effect of commitment on regulatory behavior geared towards healthy eating but not for regulatory behavior unrelated to healthy eating. Participants were also asked to indicate the extent to which they felt that “being a highly regimented person is just part of who I am” and “being someone with a high level of self-control is just part of who I am” (1 - Strongly disagree, 9 - Strongly agree). This served as the measure of perceptions of self-concept consistency for the healthy eating domain and general self-regulation respectively. We predicted that perceptions of self-concept consistency for both the healthy eating domain and general self-regulation would mediate the effect of pride on regulatory behavior regardless of domain. Participants also indicated “how much progress do you currently feel you have made towards healthy eating” and “how much progress do you currently feel you have made towards exerting self-control” (1 - Very little, 9 - A great deal). This served as the measure of perceptions of regulatory goal progress for healthy eating and general self-regulation respectively. We did not expect that either perception of goal progress would mediate the influence of commitment or pride on regulatory behavior as no regulatory goal was made active in this study. Finally, participants were debriefed and thanked for their time.



## Results

*Regulatory Behavior.* To calculate each participant's level of regulatory behavior within each self-regulatory domain condition, we computed a self-regulatory choice score by coding each regulated (non-regulated) choice as one (zero), and then summing these choice codes across the 10 decisions. An ANOVA revealed an interaction between the regulatory domain and disposition factors ( $F(2, 259) = 3.17, p < .05$ ; see fig. 3.5). In the specific domain condition, participants were more likely to make healthy choices in both the pride ( $M = 6.73; F(1, 259) = 16.34, p < .01$ ) and commitment conditions ( $M = 6.19; F(1, 259) = 7.33, p < .01$ ) compared to the no emotion condition ( $M = 5.07$ ). In contrast, in the general domain condition, participants were still more likely to make regulated choices in the pride condition ( $M = 6.38$ ) compared to the no emotion condition ( $M = 5.50; F(1, 259) = 4.71, p < .05$ ). However, participants in the commitment condition no longer made more regulated choices ( $M = 5.14; F < 1$ ) than the no emotion condition. These results demonstrate that pride has the potential to encourage a wide array of regulatory behaviors that may not otherwise occur from commitment within a specific domain.

*Mediation Analyses.* An ANOVA on the commitment, specific domain item revealed a significant main effect of the disposition factor ( $F(2, 259) = 6.64, p < .01$ ). Regardless of regulatory domain, participants in the commitment condition were more likely to indicate being committed to healthy eating ( $M = 6.80$ ) than the pride ( $M = 5.98; F(1, 259) = 8.57, p < .01$ ) and no emotion conditions ( $M = 5.90; F(1, 259) = 12.26, p < .01$ ). However, an ANOVA on the commitment, general domain item did not yield any significant differences among conditions ( $F < 1$ ). These results show that commitment to

healthy eating will enhance commitment to that specific regulatory behavior but not for regulatory behaviors situated outside of the healthy eating domain.

An ANOVA on the self-concept perception, specific domain item revealed a significant main effect of the disposition factor ( $F(2, 259) = 6.71, p < .01$ ). Regardless of regulatory domain, participants in the pride condition were more likely to see being healthy as part of who they were in the pride ( $M = 6.53$ ) than in the no emotion ( $M = 5.69; F(1, 259) = 10.01, p < .01$ ) and commitment conditions ( $M = 5.66; F(1, 259) = 11.01, p < .01$ ). A similar main effect of the disposition factor emerged on the self-concept perception, general domain item ( $F(2, 259) = 7.14, p < .01$ ). Regardless of regulatory domain, participants in the pride condition were more likely to see being regulated as part of who they were in the pride ( $M = 6.84$ ) than in the no emotion ( $M = 5.90; F(1, 259) = 12.05, p < .01$ ) and commitment conditions ( $M = 5.95; F(1, 259) = 10.33, p < .01$ ). These results demonstrate that pride has the potential to lead people to see other regulatory behaviors as being consistent with their self-concept, even when the regulatory behavior is reflective of a separate domain that elicited the pride. An ANOVA on the goal progress perception, specific domain item and on the general domain item did not reveal any significant differences among conditions (all  $F$ s  $< 1$ ). These results show that neither commitment nor pride alter perceptions of goal progress when no regulatory goal is active.

We predicted that the effect of commitment on regulatory behavior should depend on whether the regulatory behavior is specific to the domain of expressed commitment (i.e., healthy eating) or not. When regulatory behavior pertains to healthy eating, commitment should increase regulatory behavior and be mediated by commitment to

healthy eating, but not commitment to general self-regulation, perceptions of self-concept consistency, or goal progress. When regulatory behavior does not pertain to healthy eating, commitment should not influence regulatory behavior. We tested this prediction by conducting a mediation analysis using model 15 in PROCESS (Hayes 2013), with disposition as our predictor variable (such that commitment was coded as one and no emotion as zero), self-regulatory domain as our moderating variable, and regulatory behavior as the outcome variable. We also included all six items that measured commitment, perceptions of self-concept consistency and goal progress across regulatory domains as potential mediators. In support of our hypotheses, disposition significantly predicted commitment to healthy eating ( $\beta = .90, p < .01$ ). Disposition did not significantly predict any other potential mediating variables. In addition, the commitment to healthy eating by self-regulatory domain interaction predicted regulatory behavior ( $\beta = -.48, p < .05$ ). When regulatory behavior pertained to healthy eating, the disposition factor to regulatory behavior through commitment to healthy eating (indirect effect) was significant and did not include zero (indirect effect = .32; 95% CI: .06 to .78). However, when regulatory behavior did not pertain to healthy eating, no significant indirect effect was observed (indirect effect = -.11; 95% CI: -.42 to .15).

We predicted that the effect of pride on regulatory behavior should not depend on self-regulatory domain and should be mediated by perceptions of self-concept consistency, but not commitment or goal progress. We tested this prediction by conducting a mediation analysis using model 4 in PROCESS (Hayes 2013), with disposition as our predictor variable (such that pride was coded as one and no emotion as zero), regulatory behavior as the outcome variable, and all six items that measured

commitment, perceptions of self-concept consistency and goal progress across regulatory domains as potential mediators. In support of our hypotheses, disposition significantly predicted self-concept consistency in the specific domain ( $\beta = .85, p < .01$ ) and general domain ( $\beta = .94, p < .01$ ). Disposition did not significantly predict any other potential mediating variables. The disposition factor to regulatory behavior through self-concept consistency in the specific (indirect effect = .25; 95% CI: .08 to .54) and general domain (indirect effect = .28; 95% CI: .07 to .63) were significant and did not include zero.

### **Discussion**

The results shed additional light on the influence of pride on regulatory behavior and the important ways in which it differs from commitment. When regulatory behavior was specific to the domain from which commitment or pride were experienced (i.e., healthy eating), both increased regulatory behavior in a similar manner. When regulatory behavior was not specific to the healthy eating domain, only pride increased regulatory behavior. The results are consistent with our conceptualization that pride, as a consequence of its self-evaluative thoughts, leads to inferences about one's self-concept when no regulatory goal is active. This opens up the potential for pride to enhance regulatory behavior across a variety of domains in a way that commitment to a specific domain cannot.

### **STUDY 5**

Typically, pride is an emotion experienced as a result of an achievement obtained by the individual. Yet, in other cases, it is possible for pride to be experienced as a result of the achievements of those close to us (Pinkus et al. 2008; Tracy et al. 2007). Study 5

explored the consequences of this shift, whereby the accomplishment that brought on the pride experience was not the result of the experiencer's own doing but rather a close family member. To the extent that someone else's achievement reflects a person who the individual experiencing pride cares deeply about, we predicted that the subsequent experience of pride should still lead people to seek out regulatory behavior as a means of remaining consistent with one's idealized self. This is because the people we care about also tend to share the same values system as us (Stets 2005); an observation that implies that each person's version of their ideal self-concept would be quite similar. Thus, when someone close to us achieves success, the experienced pride that results still signals to increase one's regulatory behavior as a means of striving towards one's ideal self-concept.

In contrast when a regulatory goal is active, we predicted that an experience of pride resulting from someone close to us would not result in perceptions of goal progress or decreased regulatory behavior. This is because people experiencing pride as a result of the achievement of someone else will not misattribute that success to their own goals. As a result, when a regulatory goal is active, pride will no longer signal that progress has been made towards the goal, and instead people should continue to engage in regulatory behavior.

## **Method**

*Participants and Design.* Participants were 368 undergraduate students (60% female,  $M_{Age} = 20.45$ ) who participated in exchange for course credit. Participants were randomly assigned to one of six conditions in a 2 (regulatory goal: active vs. inactive) x 3 (emotion: no emotion, self-pride, other-pride) between-subjects design.

*Procedure.* Participants were told that the session consisted of two unrelated studies. The first study used the same goal priming manipulation from study 3. Participants in the inactive regulatory goal condition listed sources they used to receive the news. Participants in the active regulatory goal condition listed activities they performed to be healthy. The second study consisted of the same writing task from study 3 and served as the manipulation of emotion. Participants in the no emotion condition were asked to write about a typical day while the self-pride condition described an accomplishment that has always made them feel proud. In the other-pride condition, the only difference from the self-pride condition is that participants were asked to write about a parent's accomplishment that has always made them feel proud. After participants finished writing their response, they were told that they would answer a few remaining personality and demographic questions. However, before doing so, the instructions stated that each participant would be receiving a snack to take with them on the way out of the lab as a sign of appreciation for their participation. Participants were then asked to make a choice between two snacks, such that one option was healthy (baby carrots) while the other option was indulgent (Oreos). The snack each participant chose served as our measure of regulatory behavior. After making their choices, participants were asked to indicate the extent to which they felt that "being a highly regimented person is just part of who I am" (1 - Strongly disagree, 9 - Strongly agree). This served as the measure of perceptions of self-concept consistency. Participants were also asked to indicate "how much progress do you currently feel you have made towards healthy eating" (1 - Very little, 9 - A great deal). This served as the measure of perceptions of regulatory goal progress. In addition, participants also indicated "how committed do you currently feel

towards healthy eating” (1 - Not at all committed, 9 - Very committed). This served as the measure of commitment. Finally, participants were extensively debriefed, thanked for their time, and handed their chosen snack as they exited the lab.

## Results

*Regulatory Behavior.* A binary logistic regression revealed an interaction between the regulatory goal and emotion factors ( $\chi^2(1) = 3.90, p = .05$ ; see fig. 3.6). In the inactive regulatory goal condition, participants were more likely to select baby carrots in the self-pride (73.2%;  $\chi^2(1) = 11.63, p < .01$ ) and other-pride conditions (67.2%;  $\chi^2(1) = 7.74, p < .01$ ) compared to the no emotion condition (43.2%). These results show that in the absence of a regulatory goal, pride resulting from a parent’s accomplishment or one’s own accomplishment can facilitate regulatory behavior. In the active regulatory goal condition, participants became less likely to select baby carrots in the self-pride condition (31.0%) compared to the no emotion condition (62.9%;  $\chi^2(1) = 12.20, p < .01$ ), while the other-pride condition did not (64.9%;  $\chi^2(1) = .05, p > .80$ ). These results indicate that pride only decreases regulatory behavior, owing to goal progress, when its experience is the result of one’s own accomplishment. Finally, in the no emotion condition, participants were more likely to select baby carrots in the active than inactive regulatory goal condition ( $\chi^2(1) = 5.23, p < .05$ ), which indicates that the goal prime was successful.

*Mediation Analyses.* An ANOVA on the self-concept perception item revealed an interaction between regulatory goal and emotion ( $F(2, 362) = 3.01, p = .05$ ). In the inactive regulatory goal condition, participants were more likely to see being healthy as part of who they were in the self-pride ( $M = 6.41; F(1, 362) = 5.64, p < .05$ ) and other-pride condition ( $M = 6.59; F(1, 362) = 9.42, p < .01$ ) than in the no emotion condition ( $M$

= 5.58). In the active regulatory goal condition, neither participants in the self-pride ( $M = 5.36$ ;  $F < 1$ ) nor other-pride condition ( $M = 5.79$ ;  $F < 1$ ) were more likely to see being healthy as part of who they were compared to the no emotion condition ( $M = 5.68$ ).

An ANOVA on the goal progress perception item revealed an interaction between regulatory goal and emotion ( $F(2, 362) = 3.43, p < .05$ ). In the active regulatory goal condition, participants were more likely to perceive making progress towards the goal in the self-pride condition ( $M = 6.62$ ) than in the no emotion condition ( $M = 5.81$ ;  $F(1, 362) = 4.55, p < .05$ ). Conversely, participants in the other-pride condition ( $M = 5.75$ ) did not differ from the no emotion condition in terms of perceived goal progress ( $F < 1$ ). In the inactive regulatory goal condition, participants did not indicate higher goal progress perceptions in the self-pride ( $M = 5.73$ ) or other-pride condition (6.18) compared to the no emotion condition ( $M = 6.04$ ; both  $F_s < 1$ ). An ANOVA on the commitment item did not yield significant differences between the regulatory goal and emotion factors (all  $F_s < 1$ ).

We predicted that the effect of each experience of pride on regulatory behavior should depend on the presence or absence of a self-regulatory goal. Self-pride should increase regulatory behavior and be mediated by perceptions of self-concept consistency when no regulatory goal is active, but decrease regulatory behavior and be mediated by perceptions of goal progress when a regulatory goal is active. Other-pride should increase regulatory behavior and be mediated by perceptions of self-concept consistency when no regulatory goal is active, but should also increase regulatory behavior when a regulatory goal is active. We tested this prediction by conducting two moderated mediation analyses using model 8 in PROCESS (Hayes 2013), with each analysis featuring one experience of



pride (coded as one) compared to the no emotion condition (coded as zero). In each analysis, emotion was our predictor variable, regulatory goal was our moderating variable, perceptions of self-concept consistency, goal progress, and commitment were our mediators, and snack choice was our outcome variable.

In the self-pride analysis, the emotion by regulatory goal interaction predicted self-concept ( $\beta = -1.15, p < .05$ ) and goal progress perceptions ( $\beta = 1.12, p < .05$ ) but not commitment ( $\beta = .08, p > .50$ ). When no regulatory goal was active, the emotion factor to regulatory behavior through self-concept perceptions (indirect effect) was significant and did not include zero (indirect effect = .15; 95% CI: .02 to .42), while goal progress perceptions (indirect effect = .06; 95% CI: -.06 to .31) and commitment (indirect effect = -.04; 95% CI: -.36 to .26) were not significant and did include zero. In contrast, when a regulatory goal was active, the indirect effect through goal progress perceptions was significant (indirect effect = -.16; 95% CI: -.45 to -.01), while self-concept perceptions (indirect effect = -.06; 95% CI: -.30 to .05) and commitment (indirect effect = -.01; 95% CI: -.29 to .30) were not.

In the other-pride analysis, the emotion by regulatory goal interaction marginally predicted self-concept perceptions ( $\beta = -.90, p = .06$ ) but not goal progress perceptions ( $\beta = -.19, p > .50$ ) or commitment ( $\beta = -.02, p > .50$ ). When no regulatory goal was active, the emotion factor to regulatory behavior through self-concept perceptions (indirect effect) was significant and did not include zero (indirect effect = .17; 95% CI: .03 to .44), while goal progress perceptions (indirect effect = .02; 95% CI: -.06 to .20) and commitment did (indirect effect = .02; 95% CI: -.05 to .21). When a regulatory goal was active, the indirect effect was not significant through self-concept perceptions (indirect

effect = .02; 95% CI: -.10 to .21), goal progress perceptions (indirect effect = -.01; 95% CI: -.20 to .10), or commitment (indirect effect = .02; 95% CI: -.06 to .21).

## **Discussion**

Our final study provides additional evidence for the underlying mechanisms responsible for the effect of pride on regulatory behavior, while illustrating a boundary condition for when these processes take hold. Using a real measure of regulatory behavior, we found that when pride was experienced in response to an achievement of those close to us, its experience led to inferences about one's self-concept when no regulatory goal was active, similar to when the pride resulted from one's own achievement. This result suggests that even pride stemming from achievements of close others can be used as information about how one should behave in order to remain consistent with one's idealized self. However, when a regulatory goal was active, pride resulting from achievement of close others did not lead to the same perception of goal progress that came with pride resulting from one's own achievement. This result highlights an important boundary condition for when pride will be perceived as informative to goal pursuit.

## **GENERAL DISCUSSION**

This research investigated a fundamental determinant of the impact of pride on regulatory behavior, an area of investigation which has produced divergent findings. Across five studies, using a variety of self-regulatory domains, we showed that pride can work to either enhance or diminish regulatory behavior depending on the presence or absence of a self-regulatory goal. We found that when no regulatory goal was active,

pride encouraged people to capitalize on regulatory-based means that could be reflective of their ideal self-concept, resulting in increased regulatory behavior. However, when a regulatory goal was active, pride signaled that progress had been made on the active goal, resulting in decreased regulatory behavior. We found this pattern of results using general regulatory behavior (studies 1 and 4), savings behavior (study 2), and healthy eating behavior (studies 3-5). We found that while the self-evaluative thoughts that accompany pride are critical to informing behavior (study 2), the self-concept and goal progress mechanisms that follow cannot be activated by simply thinking about one's self or one's goals (study 3). Pride was also found to differ from commitment in important ways, including the ability to not just encourage regulatory behavior specific to the achievement domain that led to the pride but to other regulatory behaviors that can also act to reinforce one's self-concept (study 4). Finally, we found that when pride stems from the achievement of someone close to us, its experience is still seen as informative as to how people adhere to their own ideal self-concept but is not seen as informative to their own goal progress (study 5).

From a theoretical standpoint, our evidence that pride can become informative to one's self-concept is consistent with research from Tangney and Tracy (2012), who posit that self-conscious emotions plays an integral role in the guidance of one's self-concept. While the possibility that emotion can influence aspects of our self-concept has been discussed theoretically, there have been fewer efforts to investigate this issue empirically. In our research, we show how the experience of pride can encourage behavior consistent with one's ideal self-concept across a number of self-regulatory domains. However, it is highly likely that other discrete emotions may have different influences on one's self-

concept that have implications for consumer behavior. For instance, shame is an emotion typically associated with a violation of important social standards (Duhachek, Agrawal, and Han 2012; Scheff 1990). As a result, shame might activate a self-concept motivated to engage in behaviors that are more altruistic and likely to improve one's social relationships or social standing. Similarly, awe is experienced in response to a stimulus that is unique or difficult to comprehend (Griskevicius et al. 2010). As a result, awe might activate a self-concept which seeks out learning and discovery of novel experiences.

Our findings also inform research on the interaction between emotions and goals. Most research has focused on how behavior resulting in goal attainment (nonattainment) can lead to the experience of positive (negative) emotion (Carver and Scheier 1998; Soman and Cheema 2004). Only recently have researchers started to examine how emotions can be used as an informational source that influences goal-directed behavior (Fishbach and Labroo 2007; Louro et al. 2007). In our research, we find that pride can be informative to self-regulatory goals by signaling progress towards the goal. This observation is particularly instructive given that researchers have readily acknowledged that the study of how discrete positive emotions influence our behavior is limited, as previous research has often taken a valence-based approach to studying positive emotion (Cavanaugh et al. 2007). Thus, this research complements other recent research demonstrating that the effects of discrete positive emotions on behavior are more diverse than what could be accounted for by a global positive emotion perspective (Griskevicius, Shiota, and Nowlis 2010). Future research can examine other instances in which specific emotions are diagnostic to specific goals and can generate interesting, novel predictions.

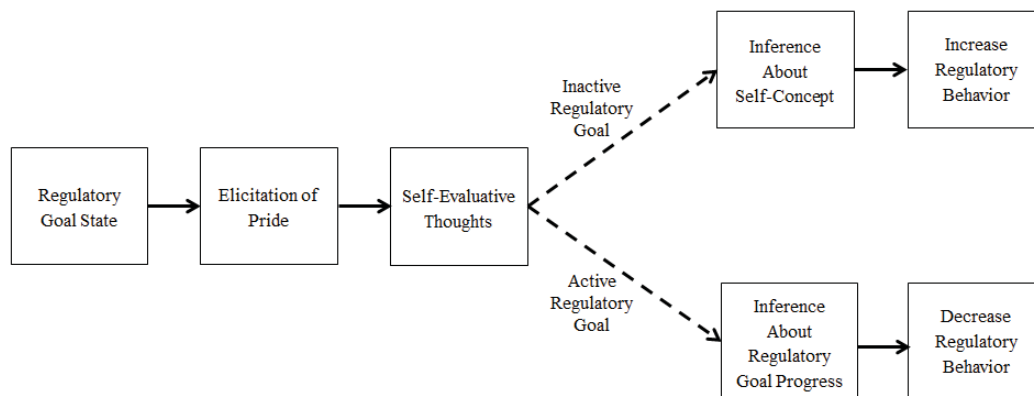
For example, when a person has the goal to be fit, boredom may be perceived as informative to goal pursuit and signal that it is time for the individual to undergo a new training regimen.

Our research also contains important insights for managers intending to use emotion to influence consumer decision making. While emotion can be an effective tool, our research also suggests that other environmental cues (e.g., goals) must be considered when emotion-based promotional strategies are implemented. For instance, managers of virtuous products (e.g., health supplements and savings accounts) may consider creating advertisements that make consumers focused on achievement, knowing that their subsequent pride will lead them to consume products that reinforce their ideal sense of self. In contrast, managers of hedonic products (e.g., indulgent desserts and luxury clothing) may encourage indulgence by first showing consumers alternative virtuous products and then making them proud of how frequently they have exerted control. Our results from study 5 also provide valuable insights for how managers of virtuous goods might craft marketing communications that leverage the pride felt from people we are close to. For example, a manager of a gym might increase memberships by creating a commercial that makes people proud of the achievements of their loved ones. Consumers are consistently balancing the need to exert self-regulate with the need to indulge and seek pleasure (Fishbach, Friedman, and Kruglanski 2003). Our research demonstrates that marketers could guide consumers towards more regulated or hedonic consumption by coupling the experience of pride with aspects of the consumer environment.

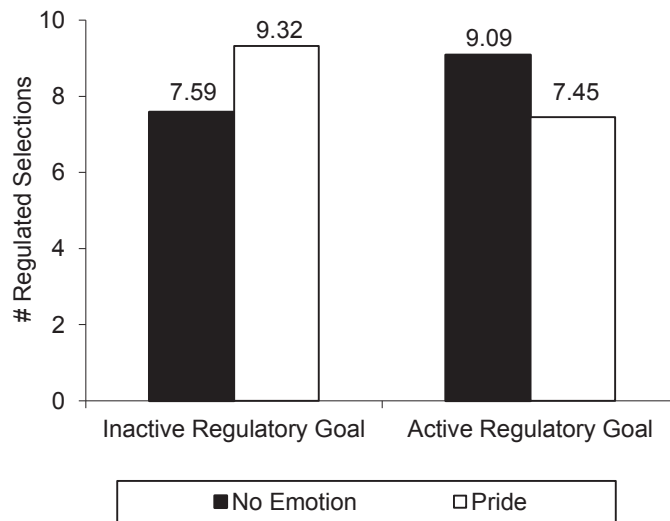
To conclude, our research uses a self-conscious emotions framework to systematically predict the situations in which pride will increase or decrease regulatory

behavior. One may wonder whether it is adaptive for pride to reduce regulatory behavior. From a balancing perspective, we believe that the reduction in regulatory behavior is adaptive. Oftentimes, successful self-regulation comes at the expense of overriding other short-term pursuits related to hedonism and indulgence (Fishbach et al. 2003; Nenkov, Inman, and Hurland 2008). To only engage in self-regulatory pursuits would prove counterproductive and could even put people in a negative mood (Gal and Liu 2011). When people are in a negative mood, their motivation to self-regulate tends to wane if not terminate altogether (Fishbach and Labroo 2007), which could result in a vicious cycle. Given that people pursue many self-regulatory goals over the course of a day, balancing these goals with other pursuits may be a way to maintain positive affect and adhere to self-regulation over the long-term.

**FIGURE 3.1**  
**THE INFLUENCE OF PRIDE ON REGULATORY BEHAVIOR**  
**BY REGULATORY GOAL ACTIVATION**

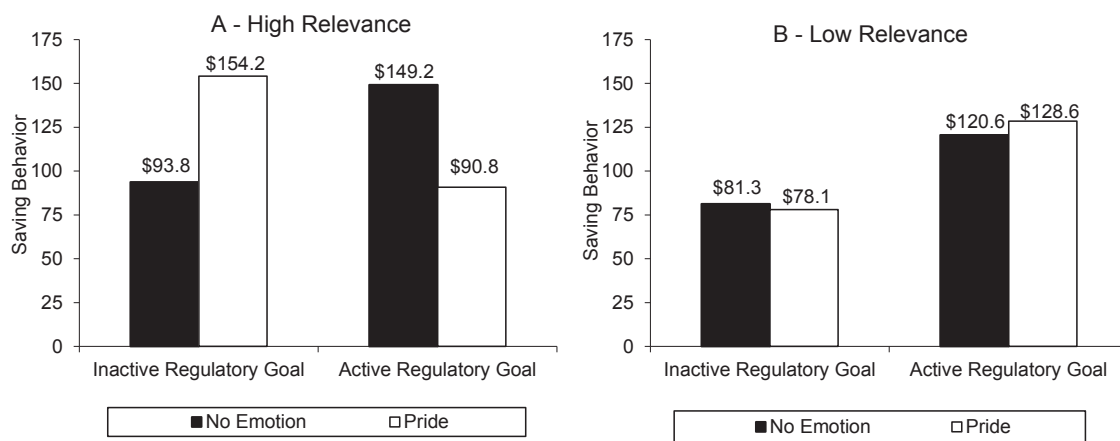


**FIGURE 3.2**  
**STUDY 1 RESULTS**

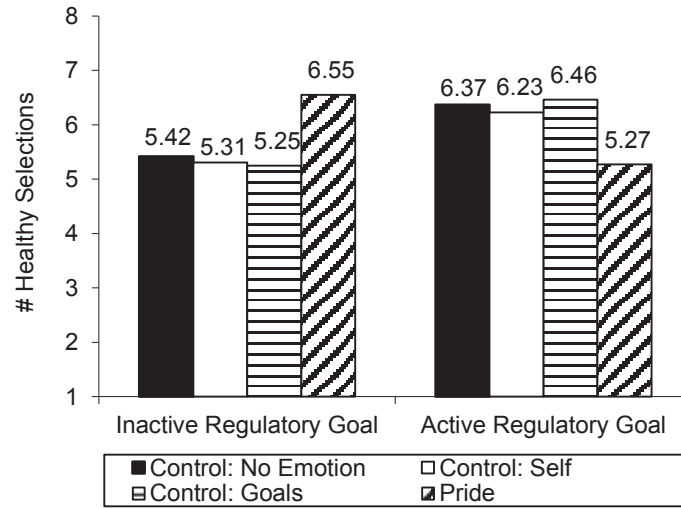




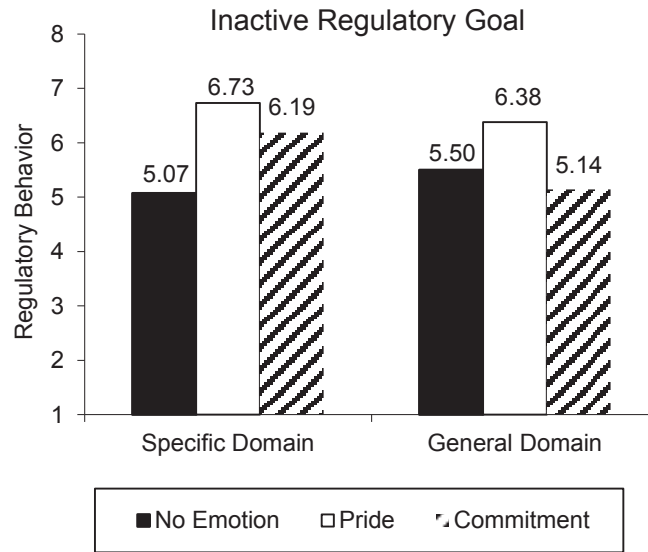
**FIGURE 3.3**  
**STUDY 2 RESULTS**



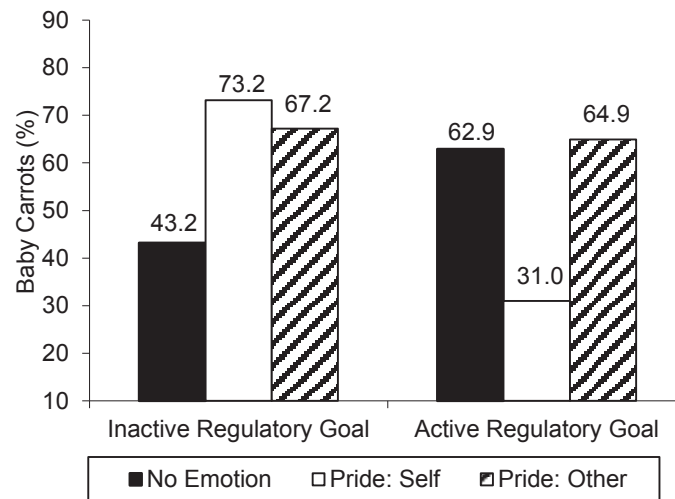
**FIGURE 3.4**  
**STUDY 3 RESULTS**



**FIGURE 3.5**  
**STUDY 4 RESULTS**



**FIGURE 3.6**  
**STUDY 5 RESULTS**



## **CHAPTER 4: HOW ENVY INFLUENCES PURSUIT OF INDIVIDUALLY-VERSUS SOCIALLY-FRAMED GOALS**

### **OVERVIEW OF RESEARCH QUESTION**

Consider two scenarios in which a consumer is envious of a peer who had recently purchased a luxury automobile. In the first scenario, the envied peer was part of the working class and purchased the luxury vehicle because of years of effortful saving and careful budgeting. In the second scenario, the envied peer was part of an affluent family and purchased the luxury vehicle using the family trust fund. Is it possible that depending on how the peer received purchased the vehicle, the consumer's experience of envy could differ?

Envy is a pervasive emotion experienced by consumers and is said to occur when one lacks something that another individual has, while either wishing it for one's self or that the other individual no longer has it (Parrott and Smith 1993). The experience of envy is negative and one of its primary action tendencies is the wish to narrow the gap between oneself and the envied individual (Smith and Kim 2007; Van de Ve, Zeelenberg, and Pieters 2011a). However, the manner in which one attempts to do this has been shown to depend on how the envy is experienced. One facet of envy, known as benign envy, is said to occur primarily when the envied individual is deserving of the superior position, while another facet of envy, known as malicious envy, occurs when the envied individual is not deserving of the superior position (Van de Ve, Zeelenberg, and Pieters 2012). When the experience of envy is benign, consumers have been shown to try and "level up" to the same status as that of the envied individual (Van de Ve, Zeelenberg, and Pieters 2009). In contrast, the experience of malicious envy has not been shown to

motivate the individual but rather to wish to see the envied individual fail (van Dijk et al. 2006). Collectively, this research would suggest that benign envy is motivating while malicious envy is not. However, prior research has examined the influence of envy primarily within the context of motivation related to the domain that elicited the envy. Less is understood about whether these different experiences of envy might influence other goals the individual could choose to pursue.

The purpose of this research is to investigate the multifaceted nature of envy in terms of its downstream consequences for the interest and motivation to pursue goals unrelated to the source of envy. We propose that the effect of benign and malicious envy on goal pursuit will vary as a function of whether the means (i.e., opportunities to pursue the goal) are framed as being pursued alone or with others. Specifically, when benign envy is experienced, we argue that consumers should prefer goal means that are socially-framed (i.e., pursued with others) because they imply a greater likelihood of bringing about self-improvement. In contrast, when malicious envy is experienced, consumers should prefer means that are individually-framed (i.e., goals pursued alone) because they imply a greater likelihood of aiding the consumer in managing their negative mood. Thus, envy can encourage or discourage goal pursuit as a function of how the goal is framed and what perceived benefits can be derived from its pursuit.

In the next section, we review research establishing envy as a multifaceted emotion. We begin by discussing the general properties of envy, before elaborating on each facet of envy (i.e., benign and malicious envy) and how they differ from one another. Next, we review the primary findings for how each of these facets of envy influence behavior and identify the current gaps that exist in our understanding of each.

We then transition into the present research; developing hypotheses for how each facet of envy can influence goal pursuit depending on how the means associated with that goal are framed. In doing so, we elaborate on the underlying mechanisms responsible for the influence of each facet of envy on behavior according to goal frame. We then transition into a summary of two studies before closing with a discussion of future directions, theoretical contributions, managerial implications, and limitations.

### **THE MULTIFACETED NATURE OF ENVY**

Envy is a negatively valenced emotion that is experienced from an unfavorable upward comparison to another person in a domain that is self-relevant and important to the individual (Smith and Kim 2007; Van de Ven et al. 2011a). The unfavorable upward comparison that precedes envy can relate to an envied individual's superior quality, achievement, or possession (Miceli and Castelfranchi 2007; Parrott and Smith 1993). For instance, envy can occur when another individual achieves first place in a competition or receives a promotion at work (Cohen-Charash 2009). Other times, envy can occur for more materialistic reasons such as when another possesses a sought after product, such as a designer handbag, or when another receives preferential treatment, as is the case with airline passengers flying first class (Van de Ven et al. 2011a). While it is well established that envy is unpleasant in its experience, researchers are less certain about whether envy is maladaptive to human functioning or if there are circumstances in which it can be beneficial. Prior research would suggest that the answer to this question depends on which facet of envy is experienced.

Van de Ven and colleagues (2009; 2011a; 2012) have found support for two distinct types of envy: benign envy and malicious envy. While both facets of envy have been shown to be equally negative as well as equally intense, they differ in other important ways based on their appraisal patterns. For instance, benign envy leads people to appraise the envy-eliciting situation as one that was controllable (i.e., they could have changed the outcome) while malicious envy elicits an appraisal that the situation was uncontrollable (i.e., they could not have changed the outcome; Van de Ven et al. 2012). In addition, benign envy leads people to infer that the inequality observed towards the envied individual is deserved, while malicious envy leads to the inference that the observed inequality was undeserved (Van de Ven et al. 2011b). While benign and malicious envy have both been found to influence people's wish to resolve the observed inequality, they differ in their problem solving approach based on these differences in appraisal patterns.

Benign envy has typically been found to encourage people to address the observed inequality by attempting to move oneself up to the level of the envied individual. For instance, Van de Ven et al. (2011b) found that when one student was benignly envious of another for an academic achievement, they spent more time working on a Remote Associates Task (purported to be a measure of creativity and leadership) compared to those who were not envious. In addition, Van de Ven et al. (2011a) found that people who were benignly envious of another for owning an iPhone indicated a greater willingness to pay for the product relative to those who were not envious. In contrast, malicious envy has been found to lead people to address the observed inequality by attempting to pull the envied individual down. For example, van Dijk and colleagues



(2006) found that when students were maliciously envious of another for imminently landing a good job, they indicated greater satisfaction when they learned that the envied individual had suffered a setback. Van de Ven et al. (2009) found that malicious envy led people to talk negatively to others about the envied individual with the objective being to ruin the individual's reputation. Taken together, this research informs our understanding of how each facet of envy will influence behaviors that pertain to the domain that elicited the envy experience. In the next section, we apply these differences between benign and malicious envy to make predictions for how each facet of envy might influence the pursuit of goals that are unrelated to the domain that elicited envy.

### **THE PRESENT RESEARCH**

In order to derive predictions for how each facet of envy might influence goal pursuit in domains unrelated to the source of envy, we draw from two key differences in the appraisal tendencies of benign and malicious envy. First, recall that one of the key differences between benign and malicious envy is in their appraisals of control, such that benign (malicious) envy is associated with appraisals of high (low) control over the situation occurring (Van de Ven et al. 2012). Given their differences in the perceived ability to have controlled the situation, it stands to reason that this same appraisal of high (low) control may extrapolate to their ability to *respond* to the situation (i.e., how one copes with the situation). Related to this possibility, Duhachek (2005) provides a multidimensional framework for understanding the different ways in which people cope with negative emotions. In his research, Duhachek posits that two coping styles exist, problem-focused coping and emotion-focused coping, which differ in terms of their

perceived ability to handle a situation. Specifically, problem-focused coping is geared towards “taking action to alter the (stress) environment”, while emotion-focused coping is aimed at “regulating one’s emotional state.” If it is indeed the case that benign envy, as a result of a high appraisal of control, leads people to perceive themselves as capable of remedying the situation, it could lead people to adopt a problem-focused coping style and engage in behaviors that are more likely to bring about self-improvement benefits . In contrast, if malicious envy, as a result of a low appraisal of control, leads people to perceive that they are not capable of remedying the situation, it could lead people to adopt an emotion-focused coping style and engage in behaviors that are more likely to bring about mood-management benefits. The implication being that each envy type could lead people to become more inclined towards certain goals according to whether they convey benefits of self-improvement or mood-management. Stated formally:

**H1a:** An experience of benign envy will lead to a problem-focused coping style as a result of appraisals of high control which will increase interest in goals that convey self-improvement benefits.

**H1b:** An experience of malicious envy will lead to an emotion-focused coping style as a result of appraisals of low control which will increase interest in goals that convey mood-management benefits.

Second, recall that both facets of envy occur as a consequence of an unfavorable social comparison to another (Smith and Kim 2007; Van de Ve, Zeelenberg, and Pieters 2011a). Thus, the default for envy is to anchor the individual outwards, focusing on other people. However, it is possible that this orientation may shift (e.g., from an outward focus on others to an inward focus on one’s self) depending on what facet of envy is

experienced. If this is so, it would imply that each facet of envy could also alter people's preferences in engage in behaviors depending on whether they are pursued with others (i.e., socially-framed) or alone (i.e., individually-framed). One appraisal dimension that benign and malicious envy differ on that could potentially cause this shift in orientation is the perceived similarity towards the envied individual. Mussweiler, Ruter, and Epstude (2004) show that when an individual makes a comparison to another and perceives that they are similar (dissimilar), the individual's cognitions and behaviors shift towards assimilation (contrast). Thus, if a person is initially oriented towards another (as a result of a social comparison), and perceives that the other person is similar, it could reinforce the person's external focus and value of socially-framed behaviors. However, if the person perceives that the other is dissimilar, it could shift the person's external focus inward to themselves and lead to a higher value for individually-framed behaviors. In the case of benign and malicious envy, each differs in their appraisals of similarity to the envied individual, such that benign envy leads people to appraise themselves as similar the envied individual while malicious envy leads to appraisals of dissimilarity (Van de Ven et al. 2009; 2012). To the extent that an individual has the opportunity to pursue a given goal, this suggests that the different appraisals in similarity could shift preferences for individually- versus socially-framed means.

**H2a:** An experience of benign envy will lead to a preference for socially-framed means due to appraisals of similarity to the envied individual.

**H2b:** An experience of malicious envy will lead to a preference for individually-framed means due to appraisals of dissimilarity to the envied individual.

Taken together, the differences in the control and similarity appraisal dimensions outlined above should lead benignly envious people to prefer socially-framed means that convey self-improvement benefits while maliciously envious people should prefer individually-framed means that convey mood-management benefits. It is important to note that while both individually- and socially-framed means can convey both types of benefits, there is research to suggest that socially-framed means may be more readily compatible with self-improvement benefits and individually-framed means with mood-management benefits. For instance, Walton et al. (2012) show that when people pursue an academic achievement goals (i.e., goal with self-improvement benefits) with others, relative to a control, they are more likely to persist at the goal and improve performance. Fitzsimons and Fishbach (2010) show that when people pursue a healthy eating goal (i.e., goal with self-improvement benefits) but perceive they are making insufficient progress, they are more likely to recruit the help of someone else to regain momentum in striving towards the goal. In contrast, Dommer, Swaminathan, and Ahluwalia (2013) show that when people who are socially-excluded are pursuing a shopping goal (i.e., goal with mood-management benefits), they are more likely to select brands that differentiate themselves (implying a focus on individuality). Taken together, this research would suggest that an association exists between socially-framed goals that provide self-improvement benefits and individually-framed goals that provide mood-management benefits. The above hypotheses and theorization are also presented in table 4.1.

Two studies test the hypothesis that the effect of envy on behavior depends on which facet of envy is experienced and how the subsequent means of a given goal are framed. Study 1 provides evidence for the basic effect, showing that benign envy leads to

a preference for socially-framed goals while malicious envy leads to an increased interest in goals that are framed in terms of being individually-pursued. Study 2 extends these basic findings by looking at a different goal domain and by providing additional insights into the association between benign and malicious envy and their corresponding emphasis on self-improvement versus mood-management benefits.

## STUDY 1

Study 1 tests the role of envy on goal pursuit as a function of goal framing. In this study, we elicit each facet of envy using the domain of academic achievement, an area that has been shown to reliably elicit feelings of envy (Van de Ven et al. 2009; 2011a). Our measure of goal pursuit is situated in the domain of having fun, looking at people's interest a videogame as a function of whether the game is framed as being played with others (socially-framed) or played alone (individually-framed). We predict that when the game is socially-framed, people who experience benign envy will express higher levels of interest. When the game is individually-framed, people who experience malicious envy should express higher levels of interest.

### Method

*Participants and Design.* Participants were 240 undergraduate students (44% female,  $M_{\text{Age}} = 19.95$ ) who participated in exchange for course credit. Twenty participants were excluded for failing to read the instructions (see details below) and were excluded (Oppenheimer, Meyvis, and Davidenko 2009), leaving a final sample of 220 used in subsequent analyses. The design was a 3 (emotion: control, benign envy, malicious envy) x 2 (goal framing: individually-framed vs. socially-framed) between-subjects design.

*Procedure.* Participants entered the behavioral lab and were seated in front of personal computers before being told that they would participate in two supposedly unrelated studies. The first study consisted of a reading task and served as the manipulation of emotion. In all three conditions, participants read about a scenario in which they had recently taken an important midterm exam for one of their classes. The passage stated how the participant had put a great deal of time and effort into studying for the exam and that they would learn of their grade later on that day when they attended class. The passages across conditions were identical except for the last paragraph which detailed the grade they received and also the grade that a classmate had received. In the control condition, participants read that they had done well on their midterm and so did the classmate. In the benign envy condition, participants read that they received a 69 on the exam and the classmate received a 94. Participants also learned that the classmate did so well on the exam because of hard work and studying for weeks in advance. In the malicious envy condition, participants also read that they received a 69 on the exam and the classmate received a 94. However, in this case, participants read that the classmate did well because of paying off the professor's teaching assistant to see the exam beforehand. We expected that benign (malicious) envy would be elicited as a result of differences in the perceived deservingness of the other person's better grade. After reading about the scenario, participants were asked to indicate how well they did on the exam, which was used as a check for reading comprehension. Twenty participants failed to indicate how they did on the exam (demonstrating a lack of attention) and were excluded.

After answering the question about the midterm exam passage, all participants moved to a second study which supposedly related to learning about consumer preferences, but was actually a measure of goal pursuit (dependent measure). The instructions stated that the purpose of the study was to get a sense of people's preferences for various consumer goods, where they would read about a product and then answer a few questions afterwards. Participants then proceeded to read about a Super Mario videogame, which was described as an opportunity to explore a world of full of adventure. The only aspect of the game's description was the manner in which it could be played. In the individually-framed condition, participants read that the game was single-player. In the socially-framed condition, participants read that the game was multi-player. After reading the description, participants were asked to rate "How desirable do you find this game?" (1 - Not at all desirable, 9 - Very desirable), "How willing are you to gather more information about this game?" (1 - Not at all willing, 9 - Very willing), and "Is this a game you would consider playing?" (1 - Not at all, 9 - Definitely). The three items were averaged ( $\alpha = .93$ ) to form an overall measure of videogame interest which served as our marker for goal pursuit. After indicating their interest in the game, participants were then asked to refer back to the midterm exam scenario and to indicate "How envious are you currently feeling?" (1 - Not at all envious, 9 - Very envious), and "To what extent do you feel that the other student deserves a good grade on the exam?" (1 - Not at all, 9 - Very much so). The first question was measured as a manipulation check for envy and the second question was intended to gauge whether the envy experienced was benign or malicious as appraisals of deservingness are a key point of distinction between the two

facets (Van de Ven et al. 2009; 2011). Finally, participants answered a few demographic questions, were debriefed, and thanked for their time.

## Results

*Pretest.* A separate pretest was conducted with 97 participants from the same participant population as that of the main study. Participants were assigned to rate one of the two versions of the videogame stimuli presented in the main study. After reading the description, each participant answered the same three videogame interest items described in the main study procedure. Participants in the individually-framed condition rated the game as desirable ( $M = 4.90$ ) as participants in the socially-framed condition ( $M = 5.34$ ;  $t(95) = -.94, p > .35$ ). This indicates that both versions of the video game were similarly liked at baseline. Participants also indicated “the extent to which this videogame provides the opportunity to have fun” (1 - Not at all, 9 - Very much so). The individually-framed videogame ( $M = 6.40$ ;  $t(47) = 4.98, p < .01$ ) and the socially-framed videogame ( $M = 6.59$ ;  $t(48) = 5.28, p < .01$ ) were considered to be associated with the goal of having fun, with an average rating above the midpoint of the scale and importantly did not significantly differ from each other ( $t(95) = -.48, p > .60$ ). Finally, participants also indicated “whether this game is something I would use” (1 - Alone, 9 - With others). The individually-framed videogame ( $M = 4.17$ ;  $t(47) = -2.16, p < .05$ ) was considered to be a game that was played alone, with an average rating below the midpoint of the scale, while the socially-framed videogame ( $M = 6.55$ ;  $t(48) = 4.19, p < .01$ ) was considered to be a game played with others, with both games significantly differing from each other ( $t(95) = -4.47, p < .01$ ). This shows that the goal framing manipulation had worked as intended.



*Manipulation Check.* An analysis of variance (ANOVA) on the envy item revealed a significant main effect of emotion ( $F(2, 214) = 31.44, p < .01$ ). Participants indicated being more envious in both benign envy ( $M = 6.25; F(1, 214) = 56.18, p < .01$ ) and malicious envy conditions ( $M = 6.01; F(1, 214) = 40.01, p < .01$ ) compared to the control condition ( $M = 3.46$ ). No differences were found between the benign and malicious envy condition ( $F < 1$ ), indicating that both groups were equally envious. An ANOVA on the perceived deservingness item revealed a significant main effect of emotion ( $F(2, 214) = 180.72, p < .01$ ). Participants in the benign envy condition were as likely to indicate that the classmate deserved the good grade ( $M = 7.49$ ) than participants in the malicious envy condition ( $M = 2.31; F(1, 214) = 255.16, p < .01$ ). This result indicates that the envy manipulation was successful in instantiating each facet of envy.

*Videogame Interest.* An ANOVA revealed an interaction between the emotion and goal framing factors ( $F(2, 214) = 17.06, p < .01$ ; see fig. 4.1). In the benign envy condition, participants were more likely to express interest in the videogame in the socially-framed condition ( $M = 6.82$ ) than in the individually-framed condition ( $M = 4.37; F(1, 214) = 20.11, p < .01$ ). In the malicious envy condition, participants were more likely to express interest in the videogame in the individually-framed condition ( $M = 6.64$ ) than in the socially-framed condition ( $M = 4.62; F(1, 214) = 14.19, p < .01$ ). In the control condition, participants in the individually-framed condition were as interested in the videogame ( $M = 5.52$ ) as participants in the socially-framed condition ( $M = 5.77; F < 1$ ).

## **Discussion**

The results support the hypothesis that each facet of envy can have different influences on goal pursuit depending on the framing of the goal. When benign envy was experienced, participants expressed a greater interest in the videogame when socially-framed. When malicious envy was experienced, participants expressed greater interest for the videogame when individually-framed. In addition, we found that benign and malicious envy differed in the perceived deservingness towards the individual, a key differentiator between the two envy experiences. One important limitation to this study, however, was the absence of measures pertaining to the control and similarity appraisal dimensions as well items that can capture the differences in preference for self-improvement versus mood-management benefits. In study 2, we address this shortcoming by including additional items that speak to each of these components and provides additional insights into our hypotheses.

## **STUDY 2**

Study 2 was designed with two objectives in mind. The first objective was to see whether the effects observed in study 1 could be generalizable to other domains. To achieve this, study 2 used a different scenario for eliciting envy, which now centered on landing an internship, and also used a different goal domain, focusing instead on health and wellness. The second objective was to provide a more direct test of our hypotheses by including additional measures for appraisals of control and similarity as well as interest in self-improvement and mood-management.

### **Method**

*Participants and Design.* Participants were 162 undergraduate students (54% female,  $M_{\text{Age}} = 20.13$ ) who participated in exchange for course credit. Eleven participants were excluded, using the same criteria discussed in study 1, leaving a final sample of 151 used in subsequent analyses. The design was a 2 (emotion: benign envy, malicious envy) x 2 (goal framing: individually-framed vs. socially-framed) between-subjects design.

*Procedure.* Participants were told that they would participate in three unrelated studies. The first study consisted of a reading task and served as the manipulation of emotion. In both conditions, participants read about a scenario in which they were currently in the process of trying to land an internship. The passage stated how the participants had recently applied to a number of internships knowing that there would be competition from their peers. They read on to learn that their top-ranked internship had rejected them in favor of a fellow classmate. However, the explanation as to how the other classmate received the internship differed by condition. In the benign envy condition, participants were told that the classmate received the internship because they worked hard and had a higher grade point average. In contrast, in the malicious envy condition, participants were told that the classmate received the internship because they had an in with the Vice President of the company. Similar to study 1, we expected that this difference in how the classmate landed the internship would lead to the elicitation of benign (malicious) envy. Participants were then asked how the classmate got the internship.

After answering the question about the internship passage, participants moved to a second study which was described as a study about student's gym preferences and served as our dependent measure of goal pursuit (dependent measure). The instructions stated

that a local gym had recently opened that wanted to gauge student interest in membership. Participants in all conditions then read about the gym, which was described as affordable and accessible regardless of one's initial abilities and fitness levels. The rest of the description that participants read differed by condition. In the individually-framed condition, participants read that this was a gym in which you were expected to train alone and set your own training regimen. In the socially-framed condition, participants read that this was a gym in which you train with others and take classes for your training regimen. Participants then learned that the gym was considering offering a free trial membership and were asked how interested they would be in redeeming the trial membership (1 - Not at all interested, 9 - Very interested), which served as our marker for goal pursuit.

The third study served as our measure for preferences for self-improvement versus mood-management benefits, which was adapted from Fishbach and Labroo (2007). Participants read that the researchers were purportedly interested in undergraduate students' activities. The instructions stated that the participant would read a series of statements that may reflect an important goal that they held. The participant's task was to then indicate the extent to which they agreed with each statement. There were 18 statements in total, such that six reflected self-improvement motives (e.g., "I want to find ways to address the deficits that I possess"), six reflected mood-management motives (e.g., "I want to feel better emotionally") and six were neutral motives (e.g., "I want to see a new movie"). Participants rated each statement on seven-point scales (-3 - Strongly reject, +3 - Strongly accept).

After completing the student activities study, participants were then asked to refer back to the internship scenario and to answer a series of questions which included "Please

rate your current mood” (1 - Negative mood, 9 - Positive mood), “How envious are you currently feeling?” (1 - Not at all envious, 9 - Very envious), “How angry are you currently feeling?” (1 - Not at all angry, 9 - Very angry), “How frustrated are you currently feeling?” (1 - Not at all frustrated, 9 - Very frustrated), “How envious are you currently feeling?” (1 - Not at all envious, 9 - Very envious), “To what extent do you feel that the other student deserves the internship?” (1 - Not at all, 9 - Very much so), “To what extent do you feel that you could have had control over the situation occurring?” (1 - Not at all, 9 - Very much so), “To what extent do you feel that you could have learned something from this situation to better yourself?” (1 - Not at all, 9 - Very much so), and “I perceive the classmate to be” (1 - Very dissimilar to me, 9 - Very similar to me).

Finally, participants answered a few demographic questions, were debriefed, and thanked for their time.

## Results

*Pretest.* A separate pretest was conducted with 49 participants from the same participant population as that of the main study. Participants were assigned to rate one of the two versions of the gym stimuli presented in the main study. After reading the description, each participant answered the same three interest items described in study 1. Participants in the individually-framed condition rated the gym as desirable ( $M = 6.00$ ) as participants in the socially-framed condition ( $M = 5.88$ ;  $t(47) = .17$ ,  $p > .75$ ). This indicates that both versions of the gym were similarly liked at baseline. Participants also indicated “the extent to which the gym was consistent with the goal of being healthy” (1 - Not at all, 9 - Completely). The individually-framed gym ( $M = 7.42$ ;  $t(23) = 7.74$ ,  $p < .01$ ) and the socially-framed gym ( $M = 7.08$ ;  $t(24) = 4.69$ ,  $p < .01$ ) were considered to be

associated with the goal of being healthy, with an average rating above the midpoint of the scale and importantly did not significantly differ from each other ( $t(95) = .62, p > .50$ ). Finally, participants also indicated whether “this is a gym that people would use” (1 - Alone, 9 - With others). The individually-framed gym ( $M = 3.83; t(23) = -2.39, p < .05$ ) was considered to be a gym used alone, with an average rating below the midpoint of the scale, while the socially-framed gym ( $M = 6.68; t(24) = 3.93, p < .01$ ) was considered to be a gym used with others, with both gym significantly differing from each other ( $t(47) = -4.40, p < .01$ ). This shows that the goal framing manipulation had worked as intended.

*Control Tests.* Several analyses were conducted to shed light on additional differences between the benign and malicious envy conditions (see table 4.2). In support of our hypotheses, participants in the benign envy condition indicated significantly greater appraisals of deservedness, similarity, and control (both in terms of control over the situation occurring and control in responding to the situation) compared to malicious envy condition. Participants also indicated similar levels of negative mood, envy, anger, and frustration, indicating that both conditions experienced envy while any changes in gym interest were not a result of changes in overall negative mood, anger, or frustration.

*Gym Interest.* An ANOVA revealed an interaction between the emotion and goal framing factors ( $F(1, 147) = 8.61, p < .01$ ; see fig. 4.2). In the benign envy condition, participants were more likely to express interest in the gym in the socially-framed condition ( $M = 6.76$ ) than in the individually-framed condition ( $M = 5.61; F(1, 147) = 4.47, p < .05$ ). In the malicious envy condition, participants were more likely to express interest in the gym in the individually-framed condition ( $M = 6.46$ ) than in the socially-framed condition ( $M = 5.39; F(1, 147) = 4.15, p < .05$ ).

*Self-Improvement versus Mood-Management Benefits.* The six items for self-improvement ( $\alpha = .73$ ) and mood-management ( $\alpha = .74$ ) were averaged to form an overall preference for each type of benefit. A repeated-measures ANOVA revealed only an interaction of emotion, and means type ( $F(1, 147) = 23.73, p < .01$ ). In the benign envy condition, participants were more likely to express interest in the self-improvement benefits ( $M = 6.32$ ) than mood-management benefits ( $M = 6.03; F(1, 147) = 16.50, p < .01$ ). In the malicious envy condition, participants were more likely to express interest in mood-management benefits ( $M = 6.29$ ) than self-improvement benefits ( $M = 6.09; F(1, 147) = 7.88, p < .01$ ). These results provide evidence in support of the hypothesis that each facet of envy is driven by different motives.

## **Discussion**

Study 2 provides additional support to the hypothesis that the experience of benign and malicious envy can lead to differences in interest to pursue goals as a function of their framing. In addition, we found support for our hypotheses in terms of differences in appraisals of similarity and control which are posited to influence people's preferences for self-improvement or mood-management benefits. The results also provide hints as to how to build on the findings that have been shown to this point. Future studies can explore how manipulating people's appraisals of similarity (to the envied individual) or control could have downstream consequences for what benefits envy leads people to emphasize as well as what goals people are interested to pursue, according to whether they are framed as individually- or socially-pursued.

## GENERAL DISCUSSION

This research examined how different facets of envy can influence goal pursuit as a function of how the goal is framed. Across two studies, we found that when benign (malicious) envy was experienced, it led consumers to prefer goals that were framed in terms of being pursued with others (pursued alone). This shift in preference is posited to occur as a result of the perceived benefits that a given goal will provide to them. In the case of benign envy, consumers prefer socially-framed goals because it implies a greater likelihood of bringing about self-improvement, while malicious envy leads to a preference for individually-framed goals because of its implications for mood-management. We found that this effect applies both to goal domains that center on having fun (study 1) as well as domains that center on self-regulation (study 2). This implies that consumers infer that they can derive self-improvement and mood-management benefits from a wide array of goals and activities. Future research could investigate whether addressing one's need for self-improvement or emotion regulation could alter subsequent preferences for individually- versus socially-framed goals. For instance, allowing consumers who experience malicious envy to emotion regulate (e.g., consumption of hedonic foods) may satiate their need for mood-management and subsequently lead to preferences for self-improvement. Likewise, allowing consumers who experience benign envy to self-improve (e.g., put together a budgeting plan) may satiate from this need and seek out opportunities to feel better.

In addition, we also found evidence, via perceptions of control over improving the situation and in (dis)similarity to the envied individual, which provides additional insights into why benign envy may orient people towards self-improvement and



malicious envy towards mood-management. Future research can investigate these divergent properties of benign and malicious envy further to see how they may moderate subsequent preference for individually- versus socially-framed goals. For instance, manipulating maliciously envious consumers to have a greater sense of control (e.g., think about situations in which you have control over your surroundings) could attenuate the need for pursuing goal that suggest a mood-management benefit and may even drive them towards goals that suggest self-improvement. Similarly, manipulating benignly envious consumers to feel less similar to the envied individual could reduce the socially-framed goals in favor of individually-framed goals.

### **Theoretical Contributions**

While the possibility that emotion can influence preferences for being alone or with others is something that has been discussed theoretically, much less has been done to investigate this issue empirically. Future research could explore other instances in which emotions might influence preferences towards individually- versus socially-framed goals. For instance, fear is an emotion that typically occurs in response to the presence or anticipation of imminent danger or harm (LaTour and Rotfeld 1997). As a result, fear has been shown to increase persuasion of mass marketing appeals (i.e., social conformity; Griskevicius et al. 2009). This suggests that fear may actually enhance pursuit of certain goals when framed as being pursued with others. Shame, in contrast, has shown to be the result of a violation of important social standards (Duhachek, Agrawal, and Han 2012; Scheff 1990). As a result, shame has been found to lead people to deprive themselves of enjoying the company of friends and family (Tangney and Tracy 2012). This suggests

that shame may actually enhance pursuit of certain goals when framed as being pursued in isolation. Future research could investigate these possibilities more carefully.

This research also contributes to goals research, showing that the manner in which a goal is framed matters as far as whether it is pursued. Oftentimes, the goals consumers pursue are adaptable with respect to framing it as individually-or socially-pursued (Fishbach, Henderson, and Koo 2011). For instance, many consumers might have the goal of being fit. Anytime the consumer decides to pursue their fitness goal, they can choose to do so alone (e.g., use the cardio machine themselves) or with others (e.g., play a game of racquetball). While we know that most goals that consumers pursue have the potential to differ on this individual/social dimension, the vast majority of goals research has been conducted under the assumption that the person is pursuing a given goal by themselves (Etkin and Ratner 2012; Fishbach and Dhar 2005; Kruglanski 1996). Future research could examine how changing the framing of the goal in this way might influence other factors that pertain to goal pursuit such as commitment to the goal, perceived progress, and the perceived likelihood of goal attainment.

### **Managerial Implications and Limitations**

This research provides a number of important implications for managers who use emotion in their promotions to influence consumer decision making. Our findings suggest that both benign and malicious envy can be useful for firms to elicit in their advertising campaigns depending on whether their product is intended for consumption in isolation or with others. For instance, managers of socially consumed products (e.g., party supplies and vacation destinations) may consider creating advertisements that elicit benign envy out of consumers as a means of increasing purchase intent. Alternatively, for managers of

goods that can be consumed in isolation or with others (e.g., food products and gym memberships), they may consider eliciting one type of envy over the other and then adjusting the perceived benefits of the product accordingly. For instance, a firm that sells health supplements might consider making their consumers maliciously envious of another individual and then discussing the benefits of their health product in terms of how it will make the consumer feel better. In addition, a firm that sells bicycles might make their consumers benignly envious of another individual and then discuss how their bikes will help the consumer self-improve. Consumers frequently make decisions about whether to consume products alone or with others. Our research demonstrates that managers could guide consumers towards one option over the other by coupling the experience of envy with a clear communication of the product benefits.

This research was not without limitations. In both of our studies, the gender and relationship of the envied individual was ambiguous to the participant which could have added variability to our dependent measures. The primary reason for this is that there have been clear differences found in how men and women experience envy depending on the gender of the envied individual. Specifically, women are more likely to experience malicious envy than men when the envied individual is of the same gender (van Dijk et al. 2006). Future studies could control for this issue by recruiting samples of only men or women. In addition, both studies contained a similar sample (undergraduate students) which limits the generalizability of our findings. Envy can be a somewhat difficult emotion to elicit in that it requires that the envied individual be similar to the person experiencing envy in terms of their social class (i.e., one's peers). Future studies could look at eliciting envy using a sample consisting of a different demographic by modifying

the domain in which envy is experienced (e.g., situation with a coworker). One other limitation of our studies was that both dependent measures were largely hypothetical in nature. Future studies would benefit from the use a real, behavioral measure of goal pursuit to provide a much stronger test of our hypotheses. Finally, it is still uncertain whether competition may be playing a role in the differences between benign and malicious envy. For instance, one alternative hypothesis for why benignly envious people want to pursue socially-framed means is that they want to compete with others. In other words, it may not be that benignly envious individuals are interested in improving themselves so much as they wish to exert themselves in a competitive context that differs from the envy-eliciting domain. Future research can look into this possibility more carefully.

### **Conclusion**

To conclude, it has been demonstrated that envy can be maladaptive to consumer well-being. For instance, Pollay (1986) discussed how envy can be destructive for our society by making us overly materialistic. Similarly, Belk (1985) associated envy with negative subjective life satisfaction. While these prior findings should not to be overlooked, we believe our research sheds light on some of the positive aspects of envy and complements a growing body of evidence that suggests that negative emotions can be instrumental to adaptive consumer functioning (Tamir and Ford 2012). For instance, Hackenbracht and Tamir (2010) found that sadness is useful for eliciting help from others. Tamir and Ford (2009) showed that fear can aid consumers in pursuing goals that require avoidance rather than confrontation. Coleman and Williams (2013) found that anger facilitates athletic goals, sadness facilitates charitable goals, and disgust facilitates

environmental goals. In each of these cases, a negative emotion was harnessed by the individual because its experience was perceived to be useful for performing the task at hand. In our research, we find that envy can in fact motivate consumers towards goals that have the potential to bring about benefits of self-improvement and mood-management that can lead to more fulfilling lives. These findings are also consistent with the functionalist perspective of emotion that posits that all emotions, both positive and negative, are adaptive and help serve some functional purpose in our day to day lives. Future research could investigate other situations in which negative emotions are beneficial.

**TABLE 4.1****HYPOTHESIZED INTERACTION AMONG ENVY APPRAISALS, COPING STYLE, OUTWARD SOCIAL FOCUS, AND MEANS FRAMING**

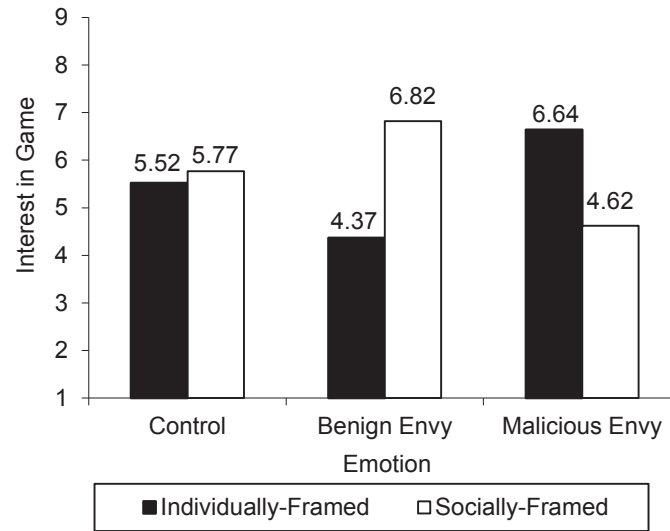
<b>Emotion</b>	<b>Control and Similarity Appraisals</b>	<b>Coping Style and Benefit Type</b>	<b>Outward Social Focus</b>	<b>Effect of Means Framing on Motivation</b>
Benign envy	High	Problem-focused, self-improvement emphasis	Assimilate towards others	Individually-framed --> decrease motivation Socially-framed --> increase motivation
Malicious envy	Low	Emotion-focused, mood-management emphasis	Contrast away from others	Individually-framed --> increase motivation Socially-framed --> decrease motivation

**TABLE 4.2**  
**STUDY 2 ADDITIONAL MEASURES**

	Study 2 Additional Measures			
	Benign Envy		Malicious Envy	
	Individually- Framed	Socially- Framed	Individually- Framed	Socially- Framed
Overall Mood	4.58 <sup>a</sup>	4.62 <sup>a</sup>	4.84 <sup>a</sup>	4.90 <sup>a</sup>
Envy	5.94 <sup>a</sup>	5.78 <sup>a</sup>	6.46 <sup>a</sup>	5.63 <sup>a</sup>
Anger	4.75 <sup>a</sup>	4.30 <sup>a</sup>	5.27 <sup>a</sup>	4.73 <sup>a</sup>
Frustrated	5.81 <sup>a</sup>	5.78 <sup>a</sup>	6.43 <sup>a</sup>	5.95 <sup>a</sup>
Deservedness	5.75 <sup>a</sup>	5.76 <sup>a</sup>	4.00 <sup>b</sup>	4.15 <sup>b</sup>
Control over Situation Occuring	6.33 <sup>a</sup>	5.57 <sup>a</sup>	2.86 <sup>b</sup>	3.22 <sup>b</sup>
Control over Situation Response	6.92 <sup>a</sup>	6.54 <sup>a</sup>	5.43 <sup>b</sup>	5.54 <sup>b</sup>
Similarity	6.94 <sup>a</sup>	6.22 <sup>a</sup>	5.68 <sup>b</sup>	4.93 <sup>b</sup>

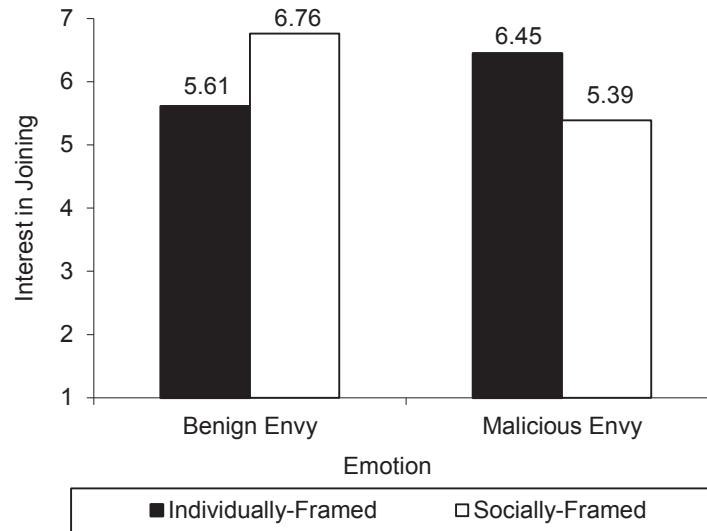
NOTE.— Means with different superscripts differ between conditions at  $p < .05$ .

**FIGURE 4.1**  
**STUDY 1 RESULTS**





**FIGURE 4.2**  
**STUDY 2 RESULTS**



## CHAPTER 5: CONCLUDING REMARKS

This dissertation, constructed of three essays, looks at the relationship between goals and emotions, attempting to examine the research topic from multiple angles. Chapter 2 showed that sadness, in the presence of a hedonic goal can lead to decreased indulgent consumption. Chapter 3 shows that the joint experience of pride and self-regulatory goals can determine when people will increase or decrease their regulatory behavior. Chapter 4 shows that envy can influence motivated behavior differently depending on whether a goal is framed as being individually or socially pursued. Collectively, this research shows that emotions can combine with goals to influence behavior in different ways. Specifically, I show that an interdependent relationship exists between goals and emotions, such that the type of goal matters with respect to how an emotion interacts with it and vice versa. Additionally, I show that the manner in which a given emotion affects goal pursuit can occur through different mechanisms. Depending on the context, emotion can serve to alter the instrumentality of goal means or the relative activation of focal and competing goals. Finally, this research provides initial evidence that there may be certain underlying components of emotion that make it more or less diagnostic with respect to goal pursuit.

This research has important implications for marketers and policy makers. For marketers, it highlights the importance of being cognizant of people's current motivational and emotional states as these factors have clear implications for consumer behavior. For instance, let's assume that a marketer is selling health products (e.g., nutritional supplements) that make the goal of being healthy salient to consumers. This research suggests that a person feeling prideful would respond differently to the health

goal than someone feeling sad. Admittedly, consumer's experiences of emotion can be highly transient. However, this is not to say that marketers cannot capitalize on extended periods of time in which the vast majority of consumers are feeling a certain way. For instance, news of a struggling economy could induce anxiety within consumers, just as a holiday season could invoke happiness, or national success at the Olympics could induce pride. In these instances, a marketer who acknowledges the power of such emotional states on behavior can alter their marketing strategy to fit with the emotional "pulse" of their consumer base. For policy makers, this research suggests that messages designed to restrain certain hedonistic consumption behaviors (e.g., binge-drinking, smoking, eating of junk food) may benefit from tailoring their messages to contain certain emotional undertones. In support of this idea, guilt-based messages have been found to work best when focusing on the benefits to avoiding harmful consumption, while shame-based messages work best when the downsides to harmful consumption are salient (Duhachek, Agrawal, and Han 2012).

A number of important implications also arise out of this research for consumers. This research suggests that consumers who are receptive to discrete negative emotions can derive benefits towards goal pursuit in certain situations. For instance, this research shows that consumers can be more successful at avoiding indulgent temptations when feeling sad. This is consistent with the instrumental approach to emotion regulation, which states that there are benefits to experiencing negative emotions depending on one's currently accessible goals (Tamir and Ford 2009; Tamir, Mitchell, and Gross 2008). This research also suggests that consumers who are cognizant of the goals they are pursuing might capitalize on the opportunity and alter their emotional state in such a way that the

emotion matches the currently pursued goal. For instance, when a consumer is motivated to pursue a social confrontation goal, they might listen to a song that puts them into a state of anger (Ford and Tamir 2012). Indeed, there are a number of ways in which consumers can alter their current emotional state and those who do might increase the efficacy of their goal pursuit efforts.

This research also provides a theoretical contribution and advances existing knowledge in the goal and emotion literature by 1) providing additional evidence for the existence of various goal/emotion interactions, 2) showing that both the type of goal and discrete emotion dictate when a match occurs to either assist or impede goal-directed behavior, 3) illustrating that the manner in which emotions influence goals can vary, and 4) indicating that there may be core emotional components that dictate when emotions are diagnostic to goal pursuit. This research also provides further evidence for the value in taking an emotion-specific approach to studying emotion and motivation. Finally, this research provides additional support to the proposition that goal states and emotions both work to adaptively influence the behaviors consumers engage in (Bargh 2006; Keltner and Gross 1999).

Despite the theoretical contributions, a primary limitation of this research is in providing only a cursory exploration of the goal and emotion relationship, where the results contained in this dissertation provide only preliminary evidence to suggest a path ahead with respect to future research. It does not, however, provide a unifying framework and there are still many unanswered questions to address. We still do not know how many emotion/goal combinations there are and how such combinations might influence one another. For instance, this research does not explore all emotions such as guilt, joy,

admiration, shame, or amusement. Likewise, there are other goals that many consumers pursue that were not explored in this research (e.g., exercising, socializing, learning, etc.). Additionally, it is still not fully understood how emotion might influence subsequent goal-directed behavior in the presence of goals. Future research can work to identify the conditions in which each goal/emotion combination will interact in a certain way, whether that be by the manipulation of goal activation, perceived goal progress, or perceived means instrumentality. Finally, perhaps the most important unanswered question is that we still do not know what the specific components of emotion are that seem to make it diagnostic to goal pursuit. Clearly, any effect of emotion is dependent on the informational properties of the discrete emotion itself. However, there have to be underlying components across all emotions that determine their diagnosticity. Future research could work to identify what these components are. To conclude, this dissertation represents an initial effort in exploring an important yet understudied area of research: the intersection of goals and emotion on goal-directed behavior. It is my hope that future research can dig deeper into this exciting area of research and ultimately develop into a unified theoretical framework, building upon the findings discussed in the current and previous research.

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