

Feeling Good and Doing Better:

How Specific Positive Emotions Influence Consumer Behavior and Well-being

by

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor of Philosophy in
the Department of Business Administration in the
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ABSTRACT

Marketers seek to create and consumers seek to cultivate a variety of positive emotional experiences. Despite their importance to consumer behavior, researchers have lacked a clear understanding of the distinct behavioral consequences of specific positive emotions. My dissertation examines how different positive emotions (e.g., hope, love, and pride) can differentially affect consumers' decisions and behaviors. I find that positive emotions can not only be differentiated but also that specific positive emotions lead to distinctly different patterns of consumption behavior, such as considering more options, donating in different ways, engaging in more effortful actions, or performing more socially conscious consumption behaviors benefiting distant others. I find important differences both with momentary emotional experiences and downstream consequences of chronic emotional experiences.

Positive emotions differ reliably in the degree to which they create a lens of problem-solving, social connection, and perceived control. For example, I find that positive emotions characterized by a social connection lens (e.g., love and gratitude) lead to increases in socially conscious behaviors benefiting distant others. The tendency to perceive one's environment through a problem-solving

lens (which characterizes hope and interest but not love and gratitude) leads to larger consideration sets and engagement in more effortful environmental actions. I also examine how positive emotions characterized by different lenses, such as perceived control (e.g., pride) and social connection (e.g., love), produce distinct behaviors within the same consumption context (e.g., giving in different ways in response to a fundraising appeal). Five studies demonstrate that positive emotions can be characterized in ways that allow prediction of distinct forms of broadening and specific consumption behaviors.

Dedication

I am eternally grateful to the incredible people who have helped me in this journey toward earning my Ph.D. and becoming a university professor. To my husband, Taymon, you have been my rock—a source of mental, emotional, and physical strength, comedy, and unwavering support since our first year at Duke University—despite the stresses of basketball and your own intense medical school program. From listening to practice talks after a full day at the hospital to helping me build my in-lab grocery store on weekends, I cannot thank you enough for all of your love, support, and confidence in me. You are my inspiration.

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GENERAL INTRODUCTION

Consumption decisions are often driven by a desire to cultivate positive emotional experiences for ourselves and for others. We give gifts to friends, plan romantic evenings for spouses, watch movies, go on vacations, and pray or meditate to cultivate a wide range of specific positive emotions—happiness, gratitude, love, amusement, pride, interest, hope and contentment, among others. Marketers, likewise, go to great lengths to engineer positive emotional environments and experiences for consumers. Advertising agencies create commercials, retailers play music, and salespeople strike up conversations with consumers to elicit positive feelings toward products and brands. In the process, consumers commit vast amounts of time and resources to those people, places and activities that make them feel *good*. However, not all people, places, and activities make consumers feel the same positive emotions; these differences make it important to understand the distinctions across positive emotions. Despite the importance of positive emotions to consumer behavior, researchers lack a clear understanding of the distinct behavioral consequences of different positive emotions. In fact, the relatively scant research examining the effects of specific consumer emotions has generally focused on *negative emotions* (Cryder et

al. 2008; Garg, Inman, and Mittal 2005; Lerner et al. 2003; Lerner, Small, and Loewenstein 2004; Raghunathan and Pham 1999).

Researchers have looked at positive emotion as a motivator of consumption behavior (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982) and have focused on understanding consumer phenomena related to the experience of positive emotions such as hope in product choice (De Mello, MacInnis, and Stewart 2007; MacInnis and de Mello 2005), love in gift giving (Belk and Coon 1993), warm versus upbeat feelings in advertising (Burke and Edell 1989), and desire for particular goods, experiences (Belk, Ger, and Askegaard 2003), and self-rewards (Mick and DeMoss 1990). However, there is no overall framework for systematically characterizing the properties of different positive emotions that may differentially influence consumer behaviors.

Theoretical development has focused on the influence of positive moods and positivity more generally. Most of what is known about positive emotions derives from the study of the lowest common denominator—generalized positive affect. In addition, the majority of empirical work on the effects of positive emotions draws from valence-based tests contrasting a generally positive versus negative mood or emotional state.

In sum, prior work does not provide an integrated approach to examining the differential effects of specific positive emotions. In the present research I build from two influential theories within the emotion literature—*appraisal theory* and *the broaden-and-build theory of positive emotions*—to predict how specific positive emotions may differentially affect and systematically influence consumption behavior.

Appraisal theories suggest that emotions can be characterized by a variety of underlying dimensions. Appraisal dimensions have proven useful for understanding differences between different negative emotions, for example anger and fear (Lerner and Keltner 2000, 2001) or sadness and anxiety (Raghunathan and Pham 1999). However, relatively little is known about the appraisal dimensions characterizing and differentiating positive emotions (see Ellsworth and Smith (1988b) and Tong (2007) for two attempts using different methods). To date research has focused on a small number of specific appraisal dimensions that account for most of the variance in *negative* emotion. Examining a broader range of appraisal dimensions specific to positive emotions will not only help to differentiate positive emotions but also advance predictions of consumption behaviors linked to specific positive emotions.

The broaden-and-build theory of positive emotion suggests that unlike negative emotions, which narrow action tendencies, positive emotions function to broaden momentary thought-action repertoires and build enduring personal resources (Fredrickson 1998; Fredrickson 2001). Although the broaden-and-build theory suggests that all positive emotions broaden thought-action repertoires similarly, I argue that specific positive emotions may broaden in distinctly different ways.

In particular, although appraisals of control and certainty have proven useful for distinguishing among negative emotions, additional appraisals may be needed to understand important links between positive emotions and consumption behavior. For example, might some positive emotions change the degree to which a person feels connected to other individuals, while other positive emotions alter the focus of attention on the present versus the future, and still others influence the amount of effort put into a decision making task? Research has shown that differences in self construal (Singelis 1994, e.g., see Agrawal and Maheswaran 2005), temporal construal (Trope and Liberman 2003, e.g., see Chandran and Menon 2004), and need for cognition (Cacioppo and Petty 1982, e.g., see Inman, McAlister and Hoyer 1990) are constructs that have predicted important differences in consumption behaviors. Thus, different

specific positive emotional experiences are likely to differentially influence consumer behavior.

This dissertation explores how both momentarily and chronically experienced positive emotions influence consumers' decisions, behaviors, and well-being. Through a series of studies I will show that: 1) different positive emotions can be reliably distinguished by underlying appraisal dimensions (Lerner and Keltner 2000, 2001; Raghunathan and Pham 1999; Smith and Ellsworth 1985), 2) different positive emotions (momentary and dispositional) predict distinct and enduring patterns of consumption behavior (e.g., certain positive emotions broaden a consumer's sense of self while others broaden the consumer's effort and consideration set), and 3) distinct patterns of emotional appraisal can be activated by viewing television commercials and impact subsequent behavior.

Thus, in this dissertation I address how specific positive emotions and specific types of positive emotions influence consumption behaviors and consumer well-being, focusing particularly on the appraisal dimensions of *social connection*, *temporal focus*, *problem-solving*, and *perceived control*, which I will describe in detail in the research overview. This dissertation research is important for a variety of reasons. First, it integrates two important emotion

theories—appraisal theory and the broaden-and-build theory of positive emotions—to generate predictions that differentiate among a large class of emotions vitally important to consumer behavior yet to date largely regarded as undifferentiated. Second, it demonstrates that the appraisal dimensions that explain differences among positive emotions are distinct from those focused on for negative emotions. Third, it provides an explanatory link between momentary and chronic experiences of specific positive emotions and distinct consumption tendencies. Finally, it provides the first empirical demonstration of differential broadening, showing that specific positive emotions broaden in different ways.

In the next section, I review the relevant literature, offer a more detailed description of my approach, and highlight appraisal dimensions that may be particularly important for examining the influence of different positive emotions on consumption behaviors. I then describe five completed studies to provide evidence that specific positive emotions function to direct consumption behavior in different ways.

OVERVIEW OF RELEVANT RESEARCH

The majority of empirical work on positive emotions makes general statements about how similarly valenced emotions influence behavior. Findings indicate that negative emotions narrow while positive emotions broaden thought and action tendencies (Fredrickson 2001). In fact, positive affect and positive emotional states have been shown to have a multitude of facilitative effects (e.g., increased creativity and improved problem solving), but these effects have not, to date, been tied to specific characteristics of positive emotions. Moreover, while most conclusions are made about positive emotions as a whole, it is unclear whether all positive emotions similarly produce the demonstrated effects and to the same degree. I now turn to the literature on positive emotions and appraisal tendency approaches to specify what is known about how positive emotion influences behavior.

Positive Emotions

Positive emotions facilitate approach behavior (Cacioppo, Priester, and Berntson 1993) and continued action (Carver and Scheier 1990). Potential targets of approach and potential actions vary widely, yet most of what is known about positive emotions derives from the study of generalized positive affect.

Positive Affect. Positive affect has been defined as “a pleasant feeling state or good mood” (Estrada, Isen, and Young 1994), with a multitude of beneficial effects on thinking and behavior. Isen and colleagues argue that positive affect “enlarges the cognitive context” (Isen 1987, p. 222) and show that positive affect leads to broader thinking and categorization (Isen and Daubman 1984; Isen, Daubman, and Nowicki 1987; Kahn and Isen 1993); increased mental focus (Kuhl and Kazen 1999); better problem-solving (Estrada, Isen, and Young 1997); less biased processing of health-risk information (Reed and Aspinwall 1998); and increased helping, generosity, and interpersonal understanding in the context of social interaction (Isen 2001; Isen, Clark, and Schwartz 1976). However, different positive emotions may foster these tendencies to different degrees.

Specific Positive Emotions. While most prior work has focused on generalized positive affect, some recent work demonstrates different effects of positive emotions. Empirical findings suggest that incidental gratitude but not amusement increases effort in costly prosocial behaviors (Bartlett and DeSteno 2006); elevation but not amusement or admiration motivates kindness toward others (Algoe and Haidt 2009); happiness but not peacefulness increases processing of self-referent health appeals (Agrawal, Menon, and Aaker 2007); pride and empathy appeals differentially affect persuasion of individualists and

collectivists (Aaker and Williams 1998); pride generates more self-control than happiness (Eyal and Fishbach 2006); and pride increases liking by interaction partners (Williams and DeSteno forthcoming). While this recent work makes it clear that specific positive emotions can have differential effects, these researchers often draw from disparate theories to arrive at their conclusions. I believe consumer researchers will be better able to predict and explain the impact of specific positive emotions if these emotions are related to one another within an overarching taxonomy of appraisal dimensions.

In sum, prior work does not provide an integrated approach to examining the differential effects of specific positive emotions. I combine the appraisal tendency approach with Fredrickson's (2001) broaden-and-build theory of positive emotions to provide an integrated approach.

Appraisal Tendency Approaches

Numerous appraisal theorists have sought to characterize and capture the underlying structure of emotion (Arnold 1960; Frijda 1986; Lazarus 1991a; Ortony, Clore, and Collins 1988; Roseman 1991; Roseman, Spindel, and Jose 1990; Smith and Ellsworth 1985; Weiner 1985). Appraisal theories differ considerably in terms of the particular facets of emotional experience they capture; however,

they share certain characteristics. Appraisal theories assume that emotions are mental states generated by cognitive appraisals reflecting what an event or situation means to an individual (Lazarus 1991b). Each emotion is characterized by a distinctive pattern of appraisal. For example, anger is associated with a heightened sense of certainty and control (Smith and Ellsworth 1985). Virtually all appraisal theories include the dimension of valence (i.e., positive vs. negative) but differ markedly in the number and identity of specific appraisals included. For the purposes of the present research, I draw on Smith and Ellsworth (1985) because they provide both a commonly referenced appraisal framework (e.g., Lerner and Keltner 2000, 2001) and an accessible empirical method for investigating dimensions of emotional experience. See Scherer, Schorr, and Johnstone (2001) for a more complete review of appraisal theories.

Smith and Ellsworth's (1985) empirical work has been particularly generative in understanding appraisal dimensions (i.e., the meanings associated with an event or situation). They show that six appraisal dimensions—attention, pleasantness, certainty, anticipated effort or obstacle, agency, and situational control—reliably discriminate 15 different emotions, nine negative (sadness, anger, boredom, fear, contempt, disgust, frustration, shame, and guilt) and six positive (happiness, challenge, hope, interest, surprise, and pride). Note that this

set of six positive emotions largely neglects positive emotions characterized by lower arousal levels, such as contentment, and social emotions, such as gratitude and love.

Smith and Ellsworth and other researchers generally have concluded that positive emotions are relatively undifferentiated in their appraisal and action tendencies (Ellsworth and Smith 1988a, b; Shaver et al. 1987; Smith and Ellsworth 1985; Taylor 1991). However, certain appraisals may be especially important or central for some emotions but not others (Smith and Ellsworth 1985). Thus, I contend that the set of emotions considered in the earlier appraisal work may have led to a premature conclusion due to the specific set of appraisal dimensions considered. In other words, capturing differences in positive emotions may require extending the set of appraisal dimensions typically examined to more fully capture the unique function positive emotions serve.

Not only are different emotions characterized by different patterns of appraisal, but these appraisals have been shown to affect judgments. Lerner and colleagues have suggested that emotion creates a perceptual lens (Lerner and Keltner 2000), which shapes the way people view their environment. Researchers have found that distinct emotions of the same valence (e.g., anger and fear) but differing in appraisals (e.g., high vs. low certainty and control) have different

effects on judgments and decisions. For example, angry people make more optimistic judgments of future events than fearful people (Lerner and Keltner 2000); sad individuals prefer high risk/ high reward options more than anxious people (Raghunathan and Pham 1999); and sadness and disgust differentially influence selling and choice prices (Lerner et al. 2004). However, with the exception of the inclusion of happiness¹ in one study to control for valence in making the focal fear/ anger distinction (Lerner and Keltner 2001), past empirical work has focused primarily on differentiating negative emotions.

Broaden-and-Build Theory of Positive Emotions

Fredrickson argues that unlike negative emotions, which narrow action to specific tendencies characteristic of the particular negative emotion (e.g., anger produces a tendency to fight and fear produces a tendency to flee), positive emotions serve to broaden momentary thought-action repertoires and build enduring personal resources (Fredrickson 1998, 2001). Broadened thought-action tendencies—to play, to explore, to savor and to integrate—represent ways that positive emotions extend habitual modes of thinking or acting. This broadening builds an array of enduring personal resources, including physical, social,

¹ According to Ellsworth and Smith (1988b), happiness is the least distinguishable of all the positive emotions, characterized almost solely by valence.

psychological and intellectual (Fredrickson 1998, 2001), ultimately building positive upward spirals for well-being (Fredrickson and Joiner 2002).

Fredrickson and others demonstrate that positive emotions broaden the scope of attention, thought, and action (Fredrickson and Branigan 2005), reduce own-race bias (Johnson and Fredrickson 2005), and facilitate intuitive coherent judgments (Bolte, Goschke, and Kuhl 2003). Although the theory addresses positive emotions more generally, Fredrickson's empirical work has focused on joy, contentment, and amusement (compared to a neutral state and negative emotions such as sadness, anger, and anxiety). I argue that although positive emotions may serve the overarching function of broadening, specific positive emotions may facilitate different types of broadening that differentially affect thought and action. That is, different positive emotions may facilitate distinct broadening tendencies associated with each emotion's appraisal tendencies (e.g., hope's association with an appraisal of high problem-solving might increase consideration of options in decision making or more effortful behavior).

In summary, most appraisal tendency work focuses on negative emotions. Most of what is known about positive emotion is valence-based, stemming from work contrasting positive and negative emotions or moods and neglecting appraisal dimensions other than valence (i.e., pleasantness). Greater attention to

appraisals important to positive emotions and examination of the appraisal dimensions characterizing a broader range of positive emotions may help to provide an approach for better understanding the effects of different positive emotions. One route to gaining a richer understanding of the effects of different positive emotions is to examine new appraisal dimensions specifically tailored to a wider range of positive emotions.

Key Appraisal Dimensions Important to Consumption Behavior

Positive emotion is a critical motivator of consumption behavior (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982). While the emotion literature suggests a variety of functions that emotions can serve, the particular behaviors motivated by different positive emotions have been largely unexplored. The consumer behavior literature offers some insight into the types of behaviors often motivated by positive emotional experiences. Further examination of these consumption experiences and tendencies may help to elucidate the dimensions of emotional experience that differentially drive consumption behaviors. In addition, consideration of established individual differences may further inform this pursuit, as individual differences essentially form chronic lenses similar to the way that different emotions create momentary

lenses. In the present research I focus on four focal dimensions particularly relevant to consumption behavior: social connection, temporal focus, problem-solving and perceived control.

Social Connection. Positive emotions serve an important social function in regulating relationships and maintaining social bonds (Keltner and Haidt 1999; Shiota et al. 2004). In pursuit of positive emotional experiences and social bonds, consumers engage in fan communities (Kozinets 2001), brand relationships (Fournier 1998), brand communities (Muniz and O'Guinn 2001; Muniz and Schau 2005), and donation behaviors (Strahilevitz and Myers 1998) and view possessions as extensions of self (Belk 1988). Although the specific domains of consumption vary, a key theme across this work is that consumers often seek a sense of connection. Consumers achieve and perpetuate this sense of connection and expanded sense of self through their consumption. The construct of self construal also suggests that individuals vary in terms of how they define themselves (e.g., personal self ("I") versus social self ("we")); Ellemers, Spears, and Doosje 2002) as well as how they relate to others (e.g., independent vs. interdependent; Markus and Kitayama 1991). Based on this literature, an important question is whether different positive emotions may engender this tendency toward social connection to differing degrees. Specifically, might

certain positive emotions cause consumers to define themselves more broadly in terms of their connection to others or more readily experience an expanded sense of self and, in doing so, change their consumption behavior (e.g., willingness to engage in socially conscious consumption behaviors benefiting distant others or make donations to international relief efforts)?

Temporal Focus. Consumer behavior researchers have suggested that different temporal orientations may induce different motivations, different plans, and consumption of different types of products (Bergadaa 1990). Findings show that temporal orientation affects responses to advertising (Meyers-Levy and Maheswaran 1992), consumption impatience (Li 2008), susceptibility to context effects (Malkoc, Zauberan, and Ulu 2005), and perceptions of risk (Chandran and Menon 2004). Temporal construal theory suggests that distant future situations are construed on a higher level than near future situations, and findings show that desirability has a larger effect than feasibility for more distant future outcomes (Liberman and Trope 1998). Thus, another important question is whether different positive emotions may produce different temporal orientations, which may then shape consumers' decisions and behaviors. Specifically, might certain positive emotions cause consumers to place greater

emphasis on the present versus the future and, in doing so, change their consumption decisions (e.g., likelihood of making an impulsive purchase)?

Problem-solving. Consumer behavior researchers have long been interested in understanding how emotion influences cognition and decision making. There exists a substantial literature contrasting the effects of positive and negative affect and moods on related decision processes, such as categorization, depth of processing, reasoning ability, and risk perceptions (see Cohen, Pham, and Andrade 2008 for a review). Findings suggest that positive affect and positive mood enhance reasoning and problem-solving (see Isen 2001; Isen 2008 for reviews); however, there exist some notable exceptions. For example, other studies show that positive affect and positive mood reduce breadth of attention and decrease the depth with which consumers process substantive information (Batra and Stayman 1990; Bless et al. 1990; Bless, Mackie, and Schwarz 1992; Bodenhausen, Kramer, and Suesser 1994; Gable and Harmon-Jones 2008; Mackie and Worth 1989; Worth and Mackie 1987). The depth of processing that an individual engages in is also related to the construct of need for cognition, which suggests that individuals vary in the extent to which they engage in and enjoy (derive positive feelings from) effortful cognitive activities (e.g., paying closer attention to the relevance of arguments presented; Cacioppo and Petty 1982).

Might different positive emotions facilitate different types of processing and tendencies toward problem-solving? Specifically, might some positive emotions cause consumers to engage in more effortful processing than others, and, in turn, change their consumption behavior (e.g., size of consideration set or depth of product search)?

Perceived Control. Appraisal theorists and emotion researchers have long regarded control or agency as an important dimension of appraisal. Previous studies have found that control explains significant variance among emotions, particularly negative emotions (Smith and Ellsworth 1985). Negative emotions characterized as high in control (e.g., anger) versus low (e.g., fear) predict more optimistic risk preferences (Lerner and Keltner 2001). Researchers have shown that perceived control produces an implementation-oriented mind-set (Chandran and Morwitz 2005); increases satisfaction and involvement (Ward and Barnes 2001); and explains reactions to consumer density (Hui and Bateson 1991) in retail and service environments. Thus, specific positive emotions may also differentially increase or decrease consumers' perceived sense of control, and, in turn, change their consumption decisions. As a well-established dimension of appraisal, perceived control offers an important point of comparison for the other key appraisal dimensions outlined above.

To the extent that specific positive emotions differ along dimensions such as social connection, temporal focus, problem-solving, and perceived control, important differences in consumption behavior may result depending upon which specific emotion is active. Rather than mere valence directing behavior, goals and associations related to specific positive emotions are likely to differentially drive behavior. By gaining an increased understanding of the appraisal dimensions underlying specific positive emotions, I am able to make nuanced predictions about how specific positive emotions will influence consumption behavior. Next, I present five studies examining how different positive emotions lead to specific types of broadening behaviors based on underlying appraisal tendencies.

AN INTEGRATED APPROACH TO CONSUMERS' POSITIVE EMOTIONS AND BROADENING

I propose an integrated approach drawing on appraisal theory and the broaden-and-build theory of positive emotions. I propose that different positive emotions are associated with different appraisals, ultimately leading to different forms of broadening. I consider an extended range of positive emotions, and I propose new appraisal dimensions to distinguish among these emotions. I argue that these different appraisal tendencies (e.g., social connection and problem-solving) lead to different forms of broadening, with implications for the process of choosing (e.g., constructing larger consideration sets or opting for more effortful consumption behaviors) and societal consequences of consumption (e.g., charitable giving, environmental actions, and socially conscious consumption behaviors).

Additional Emotions. As noted above, existing research does not capture the full range of positive emotional experience relevant to consumption behavior. Thus, I examine a broader range of positive emotions by including low arousal and social emotions (contentment, gratitude, and love¹) along with four

¹ A few appraisal theorists have included “liking/love” and “gratitude” in their theoretical frameworks (Arnold 1960; Ortony, Clore, and Collins 1988); however, the dimensions upon which these emotions were

considered by Smith and Ellsworth (1985; happiness, pride, hope and interest) to understand differences in the appraisals underlying positive emotions.

New Dimensions of Appraisal. Most appraisal theories place a priority on explaining variance in negative emotions; thus, sources of variance particularly relevant to positive emotions may have been overlooked (Cavanaugh et al. 2007). Smith and Ellsworth (1985) suggest that three appraisal dimensions seem to be particularly important to differentiating among positive emotions: certainty, agency/ responsibility/ control, and anticipated effort. However, I argue that some appraisal dimensions important to distinguishing various positive emotions from one another have not been explored. In particular, I propose and demonstrate that the inclusion of two additional appraisals, *social connection* and *temporal focus*, will help to further differentiate positive emotions. The third appraisal presented, *problem-solving*, can be captured through examination of existing dimensions of appraisal (i.e., effort and goal-path obstacle).

I propose that positive emotions differ in terms of whether outcomes are shared with or reflective of connection to others. *Social connection* captures appraisals of an individual's sense of connection to others. Positive emotions

compared, e.g., beneficial/harmful, present/absent, difficulty (Arnold 1960) or attraction (Ortony, Clore, and Collins 1988) do not capture the dimension of social connection, which I believe to be critical for differentiating these emotions.

serve a wide range of important social functions, such as forming relationships, maintaining social bonds, and coordinating successful collective action (Keltner and Haidt 1999; Shiota et al. 2004). Different people see themselves as more separate or connected to others (Brewer and Gardner 1996; Markus and Kitayama 1991) and include others in the self to varying degrees (Aron et al. 1991; Belk 1988). These self-construals can vary both chronically and situationally (Gardner, Gabriel, and Lee 1999).

These ideas, however, are not captured by prior appraisal tendency approaches. For instance, even though pride, gratitude, and love are all important to the regulation of social relationships (Shiota et al. 2004), these emotions vary in the degree and type of connection to others and hence in their implications for social regulation (Oveis, Horberg, and Keltner 2007). Pride is a self-conscious (Tangney, Dalglish, and Power 1999) and socially disengaging emotion (Kitayama, Mesquita, and Karasawa 2006), and the degree of pride an individual experiences is linked directly to one's sense of personal accomplishment. Thus pride is likely to be lower in social connection. In contrast, individuals experiencing gratitude show increased trust (Dunn and Schweitzer 2005); improved relationships with others (Algoe, Haidt, and Gable 2008); and greater willingness to engage in prosocial behavior, even when such efforts are

costly or the recipient is a stranger (Bartlett and DeSteno 2006; McCullough et al. 2001). Similarly, love is a socially engaging emotion (Kitayama et al. 2006) that serves a commitment-related function critical to bond formation (Insel 2000; Light, Grewen, and Amico 2005); increases social support (Fredrickson et al. 2008); and encourages the extension of the self (Belk and Coon 1993). Socially engaging emotions derive from and affirm the interdependence of self (Kitayama et al. 2006). Thus, both gratitude and love may be associated with higher social connection. Such high social connection emotions are likely to be important to consumers' decisions to engage in brand relationships (Fournier 1998), participate in brand communities (Muniz and O'Guinn 2001), and engage in socially conscious consumption behaviors.

In addition, the *temporal focus* of emotions is important to distinguishing among positive emotions. The causal agents and effects of emotions may occupy different places in temporal space. For example, researchers have noted an important distinction between the positive emotion associated with anticipating something versus the pleasure associated with actually consuming something (Berridge and Robinson 1995). In addition, researchers have distinguished positive experiences in terms of whether people were looking forward to, enjoying the actual experience of, or looking back at the experience (Bryant 2003;

Bryant and Veroff 2007). Thus, temporal focus may be relevant to distinguishing positive feelings associated with past events (pride or gratitude) from those associated with future events (hope), or present events (happiness or contentment). I focus on the implications of social connection, problem-solving, and perceived control in the current paper and consider future research on temporal focus appraisals in the General Discussion.

Overview of Studies 1 - 5. I argue that the differentiation among positive emotions will be better understood if I address new appraisal dimensions and additional emotions. In an extensive pilot study (study 1), I use factor analysis to develop a taxonomy of positive emotions that includes specific emotions and new appraisal dimensions not included in prior work. In studies 2 and 3, I manipulate specific positive emotions. In study 2, I manipulate hope and love to examine their influence on socially conscious behaviors benefiting distant versus close others. In study 3, I manipulate love and pride to examine whether two different positive emotions influence how consumers give and to whom they give in response to a fundraising appeal. In studies 4 and 5, I examine how multiple positive emotions influence behavior based on their underlying

appraisals.² In study 4, I utilize a new approach to capture the appraisal dispositions or tendencies associated with a constellation of dispositional positive emotions. Specifically, I use the revealed appraisal dimensions from study 1 in concert with measures of consumers' dispositional positive emotions to develop appraisal disposition scores that are then used to predict differences in two different types of consumption behaviors. In study 5, I manipulate specific types of positive emotional appraisals (e.g., social connection vs. problem-solving) using television commercials to examine the impact on effortful environmental actions (e.g., regularly checking tire pressure, bringing reusable bags to the grocery store).

Study 1: Positive Emotions—More Emotions & New Dimensions

In an extensive pilot study, I characterize a range of positive emotions in terms of both previously established and newly proposed appraisal dimensions using a procedure similar to that of Smith and Ellsworth (1985). In a fully within-subjects design, participants were asked to recall past positive emotional experiences and rate their associated appraisals. I included a wider range of

² Appraisals and appraisal tendencies are used interchangeably as overarching terms throughout this document. Appraisal dispositions are a particular instantiation of this concept based on original work presented in the following pages.

positive emotions and new appraisal dimensions that had not been included in the original Smith and Ellsworth (1985) study. This broader methodology allowed for unique patterns of appraisal relevant to consumption behavior (e.g., social connection and problem-solving) to emerge.

Method

Experimental Overview. Participants ($N = 27$) recalled emotional experiences associated with seven different positive emotions. For each emotional experience, participants responded out loud to a series of questions designed to encourage them to describe the experience in as much detail as possible. After each description, participants filled out a questionnaire rating the emotional experience along the hypothesized cognitive appraisal dimensions. The questionnaire consisted of 22 items (see table 1), which were randomized and measured on an 11-point scale. After each emotion, the experimenter played a selection of neutral music from one of two Chopin Waltzes (Green et al. 2003) as a “palate cleansing” exercise before participants described the next emotional experience. The order in which each emotional experience was described was randomized across participants.

Positive Emotions. Participants described seven positive emotions: contentment, gratitude, happiness, hope, interest, love, and pride. I selected these emotions for a number of reasons. I included positive emotions (contentment, love, and gratitude) that had not been included in the original Smith and Ellsworth (1985) study (which used happiness, interest, hope, and pride) but that I believed would both show unique patterns of appraisal dimensions and be relevant to a variety of consumption behaviors.

Appraisal Dimensions. I measured emotions in terms of nine appraisal dimensions. Seven of these were previously established by the Smith and Ellsworth (1985) study: pleasantness, attentional activity, control, certainty, goal-path obstacle, responsibility, and anticipated effort. In order to extend the ability to predict differential effects of specific positive emotions, I also included the two newly proposed appraisal dimensions, social connection and temporal focus (see table 1). I expected these new appraisal dimensions to explain a significant amount of variance amongst the different positive emotions considered.

Results

Following the analysis plan suggested by Smith and Ellsworth (1985), I identified the appraisal dimensions that explained the most variance among the

emotions using factor analysis with varimax rotation.³ The results show that positive emotions can be reliably distinguished along multiple appraisal dimensions, including two newly proposed dimensions: social connection (sense of connection to others) and temporal focus (focus on past, present, future); see technical appendix for details. The recovered dimensions shared some similarity with previous research (Ellsworth and Smith 1988b; Smith and Ellsworth 1985), but there were also important differences. Notably, the dimensions that explain the greatest amount of variance among these positive emotions are different from the dimensions used previously to understand important differences among negative emotions. I find that problem-solving (sense of anticipated effort and goal pursuit) and social connection best distinguish among the positive emotions considered.⁴ Table 2 summarizes the way appraisals differ across the various positive emotions by listing the mean scores for each emotion along the revealed dimensions (see table 6 in Smith and Ellsworth 1985, p. 829). Below, I focus on emotions characterized by problem-solving and social connection, comparing these dimensions to each other and to the established dimension of perceived control.

³ Additional analyses were run using an oblique rotation, allowing factors to be correlated. The structure, however, remained largely unchanged.

⁴ The factor pattern revealed the following dimensions in decreasing order of variance explained: problem-solving, social connection, attention/pleasantness, control, certainty, temporal focus, and situational control.

Building from these appraisal dimensions, I offer a series of hypotheses linking specific positive emotions to consumers broadening in distinctly different ways.

EFFECTS OF APPRAISALS ON CONSUMPTION BEHAVIORS

Study 1 suggests that problem-solving and social connection are important appraisals distinguishing among the positive emotions I considered. My general framework proposes that appraisal dimensions provide insight into links between specific positive emotions and consumption behavior. For instance, Smith and Ellsworth (1988a) argue that certain appraisals seem to be central and highly consistent with the coping functions of emotions. I propose that different coping functions associated with different appraisals can differentiate among broadening mechanisms. Thus, problem-solving and social connection appraisals are likely to cause consumers to broaden in distinctly different ways. Below, I cast my hypotheses in terms of “appraisal tendencies,” as I use appraisals as the theoretical basis for specific predictions regarding different types of broadening behaviors.

To the extent that consumers consistently experience emotions that are high in social connection (e.g., love), they will be more likely to engage in consumption activities that reflect this feeling of connection to others (e.g., socially conscious consumption behaviors). Whereas all consumers may be willing to help close others, that is people more similar to them (e.g., friends and

local community members), higher social connection may particularly broaden how far a person extends his or her boundary of caring or definition of extended-self. Thus, social connection may differentiate consumers in terms of their ability to feel closeness to distant others, resulting in increased helping for distant or dissimilar others (e.g., refugee families or international groups). I expect to detect effects of social connection particularly for behaviors benefiting distant others. I expect the effect to be dampened or eliminated for close others because a broadened circle of concern is less relevant in the context of close others. I hypothesize:

H1: Positive emotions with high social connection appraisal tendencies will lead to more socially conscious consumption behaviors benefiting distant others than those with low social connection appraisal tendencies; this difference will be dampened or eliminated for behaviors benefiting close others.

Although social connection-based broadening influences the beneficiaries of consumption, other types of broadening may influence the process of consumption. As mentioned previously, there are important inconsistencies regarding the influence of positive emotion on processing. Most findings suggest that positive moods and emotions encourage more heuristic processing, but there are some notable exceptions. I conjecture that appraisals of problem-solving may

resolve the discrepancies. Study 1 shows that problem-solving (encompassing anticipated effort and goal-path pursuit) is important to distinguishing among positive emotions. Thus, problem-solving appraisal tendencies may help to distinguish which positive emotions (e.g., hope) are likely to lead to more consumption activities that facilitate solving consumer purchase problems (e.g., seeking more information, considering more options, engaging in more effortful behavior). More formally, I hypothesize:

H2: Positive emotions with high problem-solving appraisal tendencies will lead to consideration of more options than those with low problem-solving appraisal tendencies.

I hypothesize that there will be a double dissociation in the effect of appraisal tendencies on types of broadening. That is, I hypothesize that social connection but not problem-solving will predict the likelihood of socially conscious consumption behaviors benefiting distant others and that problem-solving but not social connection will predict a larger number of options considered. Specifically:

H3: Different appraisal tendencies will lead to different types of broadening.

H3a: Social connection but not problem-solving will lead to more socially conscious consumption behaviors benefiting distant others.

H3b: Problem-solving but not social connection will lead to seeking more information and considering more options.

It is not only new dimensions that may predict these different broadening tendencies. Joint consideration of both new and previously established appraisal tendencies (e.g., perceived control) may enable prediction of different broadening behaviors within the same consumption context (e.g., charitable giving) as well. Previous findings suggest that positive affect universally increases prosocial behavior and charitable giving (Isen 2001). I predict that specific positive emotions (e.g., love and pride) will show different patterns of giving based on their distinct appraisal tendencies and the nature of the fundraising appeal. For instance, fundraising appeals frequently allow donors to decide how to direct their monetary gifts in terms of the donation type (e.g., restricted vs. unrestricted gifts) and beneficiary (e.g., domestic vs. international relief funds). Social connection appraisal tendencies (e.g., love) are likely to reflect increased trust in others to make good decisions about how to use donated funds. Perceived control appraisal tendencies (e.g., pride) are likely to motivate a desire for greater influence over how donated funds are used. In addition, high social connection emotions (e.g., love) which broaden an individual's circle of concern are likely to encourage support of international

relief funds, whereas high perceived control emotions (e.g., pride) which increase sense of control are likely to encourage support of efforts closer to home, that is, domestic relief funds. More formally, I hypothesize:

H3c: Positive emotions with high social connection appraisal tendencies will lead to more unrestricted gifts and positive emotions with high perceived control appraisal tendencies will lead to more restricted gifts.

H3d: Positive emotions with high social connection appraisal tendencies will lead individuals to give more to international relief funds and positive emotions with high perceived control appraisal tendencies will lead individuals to give more to domestic relief funds.

Finally, it is important to address the regular occurrence of positive emotion blends (Ellsworth and Smith 1988a). Namely, advertising and marketing efforts often cause consumers to feel more than one positive emotion (e.g., both love and gratitude) in response to a television commercial or marketing appeal. I hypothesize that appraisal based emotion blends (e.g., experiencing multiple social connection emotions vs. problem-solving emotions) will similarly impact behavior. Specifically:

H4: Problem-solving emotion blends but not social connection emotion blends will lead to more effortful environmental actions.

I examine the effects of specific positive emotions in study 2 (love and hope) and study 3 (love and pride), and the effects of appraisal dispositions for social connection and problem-solving in study 4. (The definition of appraisal dispositions is discussed in detail when study 4 is presented). In study 5, I examine the effects of positive emotion appraisal tendencies (social connection and problem-solving) through positive emotion blends experienced in response to viewing television commercials. I test hypothesis 1 using both manipulated specific emotions and dispositional appraisal tendencies, hypotheses 3c, 3d, and 4 using the former, and hypotheses 2, 3a, and 3b using the latter.

Study 2: Different Positive Emotions Lead to Different Patterns of Socially Conscious Behaviors

Leveraging the appraisal findings from study 1, I designed study 2 to test the hypothesis that positive emotions characterized by different levels of social connection would lead to different patterns of socially conscious consumption behaviors. Specifically, study 2 was designed to test the differential effects of love and hope on intentions to perform socially conscious behaviors benefiting distant others.

Method

Participants and Set-up. Eighty-five university students participated in a 25 minute study on feelings and consumer choice. The sample consisted of 51 males and 34 females ranging in age from 18 to 30. To dissociate the emotion procedure from the dependent measures of interest, participants were told that they would be completing a multi-part study. They were told that part one consisted of a writing exercise on emotional experience, part two consisted of a consumer choice survey, and part three consisted of measures of their beliefs and opinions.

Procedure

Study two consisted of a 3 emotion (between: hope/ love/ neutral) x 2 social distance of beneficiary (within: close/ distant) mixed design. Participants were randomly assigned to one of the three emotion conditions.

Emotion Induction. Following an established emotion induction procedure similar to Lerner and Keltner (2001), I asked participants to answer two computer-based questions. The first question asked participants to describe three to five situations that made them feel the focal emotion. Participants were asked to write two to three sentences about each situation. The second question asked participants to describe in more detail the one situation that made them feel the

most of the focal emotion. Participants were instructed to write the description so that a person reading it might even feel the emotion just from learning about the situation. Those in the neutral condition were asked to describe everyday activities in a format designed to match the detail and length of the emotion induction.

Socially Conscious Consumption Behavior Measures. Immediately after the emotion induction, participants completed a paper and pencil consumer choice survey. Participants were told that researchers were interested in the likelihood that they would engage in various consumption behaviors over the coming year. They were asked to read a list of 24-items and to indicate their responses on a 7-point scale, where 1 = extremely unlikely and 7 = extremely likely. The list consisted of eight focal socially conscious consumption items as well as filler items (e.g., “see a foreign film” and “attend a live music concert”). The socially conscious consumption items included were designed to tap two types of beneficiaries—close or distant others. A set of four items ($\alpha = .60$) comprised the close other measure (e.g., “Buy locally grown produce; donate used items/clothing to a charitable organization to help local families in need”); another four items ($\alpha = .70$) comprised the distant other measure (e.g., “Refuse to buy a product if it is made using child or sweat shop labor in foreign countries; donate

money to a charitable organization/ cause benefiting rainforest conservation in foreign countries"). In a separate pretest, students ($N = 31$) from the same population rated each item on a 7-point scale assessing who would benefit from the action (anchored by "close others" and "distant others"). Results confirmed that the distant other measure actions were perceived to benefit more distant others ($M_{\text{distant}} = 5.3$) than the close other measure actions ($M_{\text{close}} = 2.6$; $t(30) = 15.82$, $p < .0001$).

Appraisal Check. After completing the dependent measures, participants were asked to answer questions measuring appraisals for the emotion story that they had written on the computer at the beginning of the study session. I asked them to indicate the extent to which they felt each of the statements described what they were feeling while writing their stories on a 9-point scale, where 1 = not at all and 9 = extremely. There were four social connection items (e.g., to what extent did you feel more connected to another individual or group) and five problem-solving items (e.g., how much effort (mental or physical) did you feel this situation required you to expend; to what extent did you feel there were problems that had to be solved before you could get what you wanted).

Results

Preliminary Analyses. Initial analyses revealed a significant main effect for ethnicity, which did not interact with either of the manipulations. Specifically, ethnic minorities indicated a greater propensity to perform socially conscious behaviors regardless of emotion condition. To control for the influence of ethnicity, it was included as a covariate in the tests of all hypotheses.

Based on participants' responses to the five problem-solving and four social connection items, I created appraisal check scores (problem-solving $\alpha = .85$ and social connection $\alpha = .87$) reflecting the focal appraisals differentiating love versus hope in this study. ANOVA tests on self-reported problem-solving ($F(2, 82) = 11.34, p < .0001$) and social connection ($F(2, 82) = 17.84, p < .0001$) appraisals revealed significant emotion-induction effects. Participants in the love condition reported experiencing significantly greater social connection appraisals than those in the hope condition ($M_{\text{love}} = 7.7, M_{\text{hope}} = 5.5, F(1, 82) = 15.79, p < .0002$) or the neutral condition ($M_{\text{neutral}} = 4.4, F(1, 82) = 34.06, p < .001$). Similarly, participants in the hope condition reported experiencing significantly greater problem-solving appraisals than those in the love ($M_{\text{hope}} = 7.4, M_{\text{love}} = 5.3, F(1, 82) = 15.36, p < .0002$) or neutral conditions ($M_{\text{neutral}} = 5.0, F(1, 82) = 18.32, p < .0001$).

Hypothesis Tests. Hypothesis 1 predicted an emotion by distance interaction with love differentially increasing socially conscious behaviors benefiting distant others relative to those that benefit close others. In the model predicting the reported likelihood of engaging in socially conscious consumption behaviors, I found a marginally significant effect for emotion ($M_{\text{love}} = 4.7$, $M_{\text{hope}} = 4.3$, $M_{\text{neutral}} = 4.2$, $F(2, 81) = 2.72$, $p < .07$). The within subject effect for social distance was a significant predictor of socially conscious consumption behavior ($M_{\text{close}} = 5.3$ and $M_{\text{distant}} = 3.5$; $F(1, 82) = 206.57$, $p < .0001$), reflecting higher likelihood for closer beneficiaries. Most importantly, and as specified in hypothesis 1, social distance significantly moderated the effect of emotion on likelihood to perform socially conscious consumption behaviors ($F(2, 82) = 5.61$, $p < .005$). This interaction (see table 3) suggests that individuals experiencing momentary love (but not hope) are more likely to engage in socially conscious behaviors that benefit more distant others. There was no difference between how momentary hope and love influenced the likelihood to perform socially conscious consumption behaviors that benefit close others.

Further examination of the interaction via planned contrasts revealed that those in the love condition expressed significantly higher likelihoods of performing socially conscious consumption behaviors benefiting distant others

than those in the hope condition ($M_{\text{love}} = 3.8$, $M_{\text{hope}} = 3.1$, $F(1, 144) = 8.79$, $p < .004$).

Another planned contrast revealed that both those in the love condition ($F(1, 144) = 4.67$, $p < .03$) and those in the hope condition ($F(1, 144) = 4.99$, $p < .03$) expressed significantly higher likelihoods of performing socially conscious consumption behaviors benefiting close others than those in the neutral condition ($M_{\text{love}} = 5.5$, $M_{\text{hope}} = 5.5$, $M_{\text{neutral}} = 4.9$). Hence, with close others there appears to be an undifferentiated effect of positive emotion on socially conscious consumption behaviors.

Using the recommended bootstrapping technique for testing conditional indirect effects (Preacher, Rucker and Hayes 2007), the results confirmed evidence of moderated mediation. Specifically, the path from breadth of social connection to behavior is moderated by the social distance of the beneficiary. The bootstrapping confidence interval for the conditional indirect effect was significant for distant ($z = 2.35$, $p < .02$) but not close others ($z < 1$, *NS*), providing evidence that the meditational path predicting behavior is conditioned on the social distance of the beneficiary (see figure 1).

Discussion

Study 2 demonstrated that different positive emotions influence socially conscious behaviors benefiting close versus distant others in different ways. Using the social connection appraisal findings from study 1, I predicted that individuals who felt love would express greater intentions of engaging in socially conscious behaviors benefiting more distant others than those who felt hope. My results supported hypothesis 1; I found an emotion by social distance interaction on likelihood of engaging in socially conscious consumption behaviors, with specific emotions mattering for distant others but not close others. Specifically, I found that momentary love increased intentions to engage in socially conscious behaviors benefiting distant others more than hope. In addition, I found evidence that appraisals of social connection mediated the relationship between emotion and socially conscious consumption behaviors benefiting distant others. In contrast, I found that love and hope have the same effect on intentions to perform socially conscious behaviors benefiting close others. In the latter case, both positive emotions (love and hope) increased reported intentions above the level of those in the neutral condition. This

undifferentiated pattern for close others echoes established findings that any positive emotion increases helping behavior for those in a close others context.

Study 2 demonstrates that love is more beneficial than hope in generating an important class of socially desirable behavior (i.e., behaviors that benefit distant others), based on love's specific appraisal profile. Might love generally be a stronger, more motivating, or simply more positive emotion than hope? A stronger test of the appraisal approach would be to dissociate the impact of different positive emotions within the same context, showing that each emotion motivates behavior, but the behaviors motivated are distinct from each other.

Study 3: Different Positive Emotions Broaden In Different Ways Within the Same Consumption Context

Study 2 demonstrated that two specific positive emotions, love and hope, differentially influenced consumers' willingness to engage in socially conscious behaviors that benefited distant others. Specifically love but not hope increased willingness to engage in behaviors that benefited distant others. Building on these findings, I designed study 3 to test a different pair of specific positive emotions in a marketing context known for its reliance on consumer emotion, i.e. fundraising appeals. University fundraising appeals often entail emotional

reminders of an individual's alma mater, including friendships forged in freshman dorms, professors who served as important mentors, or championships won by school athletic teams. Similarly, nonprofit appeals often describe warm moments shared between aid recipients and organizers or depict the proud faces of volunteers who have worked to build homes and clinics. Depending on the narrative and images contained in these appeals, consumers may experience different emotions. Could different specific positive emotions differentially influence how a consumer gives to a university or non-profit organization? Study 3 was designed specifically to test the differential effects of love and pride on patterns of consumer giving.

In study 3, I use a pair of positive emotions characterized in terms of both a new appraisal dimension (social connection) and an established dimension (perceived control) to demonstrate differences in broadening within the same consumption context. Prior work indicates that positive moods and emotions encourage helping behavior (Bartlett and DeSteno 2006; Isen et al. 1976); however, different positive emotions may not lead to helping in the same way (e.g., restricted vs. unrestricted monetary gifts) or giving to the same type of recipients (e.g., domestic vs. international funds). An interesting relationship exists between love and pride; love is high in social connection but low in

perceived control, whereas pride is low in social connection and high in perceived control. In addition, both love and pride are relatively matched in the dimensions of problem-solving and attention/ pleasantness.

I predict that positive emotions high in social connection appraisal tendencies (e.g., love) versus self-reliance and perceived control (e.g., pride) will show different patterns of giving. The choice to make an unrestricted gift implies a larger trust in others to make a good decision about how to use the funds (i.e., where the staff believes it is needed most), whereas a restricted gift implies a desire for greater personal control or influence over how the funds are used. I predict that pride will lead to higher levels of restricted giving and love will lead to higher levels of unrestricted giving. Thus, appeals aimed at raising unrestricted funds may be more effective if they elicit love rather than pride. Conversely, love actually may be less effective than pride or neutral when used in appeals encouraging more exclusive or restricted gifts (e.g., specific academic scholarship fund or programmatic giving) because the broadened sense of inclusiveness and trust inspired by social connection might actually cause the decision maker to prefer to make an unfettered gift. In the event that individuals must choose how to direct a monetary gift, I predict that love, an emotion high in social connection and responsible for broadening an individual's sense of self

and circle of concern, will increase giving to international funds. In contrast, pride, an emotion high in perceived control and responsible for heightening an individual's sense of influence and need for control, will increase giving to domestic funds. Thus, I expect both emotions to motivate giving behavior in response to a fundraising appeal in such a way that the donations favor targets matched to the appraisal profile of the emotion.

Method

Participants and Set-up. Two hundred and eight university students participated in a 25 minute study on feelings and consumer choice. The sample consisted of 128 males and 80 females ranging in age from 18 to 29. To dissociate the emotion procedure from the dependent measures of interest, participants were told that they would be completing a series of shorter studies that had been bundled. They were told that the study session consisted of three parts: 1) a writing exercise on autobiographical experience, 2) a fundraising appeal, and 3) a questionnaire about feelings and consumption behaviors.

Procedure

Study three consisted of a 3 emotion (between: love/ pride/ neutral) x 2 (within: form of giving/ relief fund designation) mixed design. Participants were

randomly assigned to one of the three emotion conditions. After completing the emotion induction, all participants viewed the same fundraising appeal from the American Red Cross. Adapted from actual American Red Cross materials, the fundraising appeal described the organization's activities and ways in which people could give to the organization. Participants were then asked to make their donation decisions as they really would at this moment and told that the researchers would be selecting "1 out of every 20 participants' decisions" and actually donate to the American Red Cross as they have specified.

Emotion Induction. The emotion induction procedure was identical to that described in study 2.

Restricted vs. Unrestricted Form of Giving Decision. The appeal indicated that donors were able to make restricted or unrestricted donations to aid American Red Cross relief efforts and described accordingly. In the case of restricted donations, "you decide and control which of the relief programs is supported by your donation." In the case of unrestricted donations, "the American Red Cross staff decides and controls which of the relief programs is supported by your donation." Participants were told that they had \$50 to donate to the American Red Cross and asked how they would choose to allocate their \$50 (i.e., how much they would allocate to a restricted donation vs. unrestricted donation). They

were told that they may allocate the \$50 in any way they wished and asked to enter any number between \$0 and \$50 in the spaces provided to indicate their decision of how much of the donation would be restricted. The format of this dependent measure held the total dollar amount donated constant and measured the relative allocation of dollars. It also allowed a clear test of the hypothesis that pride shifts preferences towards restricted forms of giving while love does the opposite. The three-level restricted giving dependent measure was classified as follows: $< \$25$, $= \$25$, $> \$25$. A second two-level restricted giving measure focusing on the predicted effect of pride classified participants into those who made largely restricted donations ($> \$25$) and those who did not ($\leq \$25$).

Domestic vs. International Relief Fund Designation Decision. Next, participants completed the relief fund designation measure. Specifically, participants were asked “If unrestricted giving were not an option (i.e., you had to decide how to direct the \$50 donation), how would you allocate your \$50 donation? Please enter a dollar amount (\$0 - \$50) in each of the spaces provided.” The donation form listed domestic and international relief funds that respectively provide people across the country or around the world with immediate relief from suffering and needed long-term support. The order in which these funds were listed was counterbalanced across participants; no order

effects were found. Again, the dependent measure was focused on prioritization of the recipient relief funds rather than on the magnitude of giving. The primary prediction here is that love will increase international fund giving. Hence, this dependent measure classified allocations in terms of whether a majority of funds were directed to international relief ($> \$25$) or not ($\leq \25).

American Red Cross Donation Beliefs. Participants were asked a series of questions about their familiarity with, importance of, and beliefs about the American Red Cross organization on a 7-point scale, where 1 = not at all and 7 = very much. These items neither explained significant variance nor qualified the findings, so they will not be discussed further.

Emotions Check. After completing the dependent and beliefs measures, participants were asked to answer questions about the emotions they experienced during the story writing at the beginning of the study session. For the emotions check, participants were asked specifically about what they were feeling or experiencing while writing their stories. They were asked to indicate the extent to which they felt happy, love, loved, pride, proud, and neutral as well as how much they felt the focal emotions (i.e., how much love did you feel, how much pride did you feel) on a 7-point scale, where 1 = not at all and 7 = very much.

Appraisals Check. For the appraisals, participants were asked to revisit the story that they wrote earlier and recall specifically how they were feeling. After reading their story, participants were asked to indicate the extent to which a series of statements described what they were feeling while writing their stories on an 11-point scale, where 1 = not at all and 11 = extremely. There were three social connection items and two perceived control items.

Results

Preliminary Analyses. Initial analyses revealed a significant main effect for gender and English as a first language. Specifically, male participants indicated a greater propensity to give restricted donations across all emotion conditions. Gender was also found to interact with emotion condition; thus, it was included as an additional factor in the following analyses. Those for whom English was not a first language indicated a greater propensity to give to international funds regardless of emotion condition. To control for magnitude of positive emotion as an alternative explanation, a measure of overall positivity (i.e., an average of all positive emotion items) was included as a covariate in testing the hypotheses.

Manipulation Checks. Based on participants' responses to the focal emotion manipulation check items, I created three-item emotion check scores for love

(love, loved, how much love, $\alpha = .94$) and pride (pride, proud, how much pride, $\alpha = .95$). Tests on the love ($F(2, 205) = 45.85, p < .0001$), pride ($F(2, 205) = 28.39, p < .0001$), happy ($F(2, 205) = 15.48, p < .0001$), and neutral ($F(2, 205) = 32.32, p < .0001$) emotion checks revealed significant emotion induction effects. Participants in the love condition reported feeling significantly more love than those in the pride ($M_{\text{love}} = 6.0, M_{\text{pride}} = 4.1, F(1, 205) = 53.95, p < .0001$) or neutral conditions ($M_{\text{neutral}} = 3.6, F(1, 205) = 81.73, p < .0001$). Similarly participants in the pride condition reported feeling significantly more pride than those in the love ($M_{\text{pride}} = 5.9, M_{\text{love}} = 5.1, F(1, 205) = 10.93, p < .001$) or neutral conditions ($M_{\text{neutral}} = 4.1, F(1, 205) = 56.66, p < .0001$). Participants in the love and pride conditions reported feeling significantly more happy ($M_{\text{love}} = 5.7, M_{\text{pride}} = 5.4$) than those in the neutral condition ($M_{\text{neutral}} = 4.5, F(1, 205) = 29.08, p < .0001$) and significantly less neutral ($M_{\text{love}} = 2.6, M_{\text{pride}} = 2.9$) than those in the neutral condition ($M_{\text{neutral}} = 4.6, F(1, 205) = 63.92, p < .0001$).

Based on participants' responses to the appraisal check items, I created appraisal check scores for the focal appraisals upon which love and pride differ (social connection $\alpha = .91$, perceived control $\alpha = .75$). Tests on self-reported social connection ($F(2, 205) = 43.89, p < .0001$) and perceived control appraisals ($F(2, 205) = 8.99, p < .0002$) revealed significant emotion-induction effects. Participants in

the love condition reported feeling significantly more social connection than those in the pride ($M_{\text{love}} = 9.2, M_{\text{pride}} = 6.6, F(1, 205) = 39.16, p < .0001$) or the neutral condition ($M_{\text{neutral}} = 5.3, F(1, 205) = 84.54, p < .004$). Similarly participants in the pride condition reported feeling significantly more control than those in the love condition ($M_{\text{pride}} = 8.2, M_{\text{love}} = 6.7, F(1, 205) = 17.09, p < .0001$) but not the neutral condition ($M_{\text{neutral}} = 7.8, F(1, 205) = 1.34, p < .25$).

Hypothesis Tests. Hypothesis 3c predicted that positive emotions with high social connection appraisal tendencies (e.g., love) will lead individuals to favor unrestricted gifts and positive emotions with high perceived control (e.g., pride) will lead them to favor restricted gifts. In the model predicting the three-level restricted giving measure (i.e., <\$25, =\$25, >\$25), I found a main effect for gender ($\chi^2 = 8.12, p < .02$) and a significant emotion by gender interaction ($\chi^2 = 12.23, p < .02$). In an effort to better understand this interaction, I also ran an analysis on the two-level restricted giving measure. In a model predicting the percentage of participants choosing to make a restricted gift, I found a significant effect for gender ($\chi^2 = 8.06, p < .004$), a marginally significant effect for emotion ($\chi^2 = 4.95, p < .08$) and a significant emotion by gender interaction, $\chi^2 = 9.00, p < .01$. Significantly more men made restricted gifts than women (men = 57%, women = 37%). Planned contrasts revealed that those in the pride condition made

significantly more restricted gifts than those in the love condition (pride = 58%, love = 43%; $\chi^2 = 4.33, p < .04$) but not the neutral condition (47%; *NS*). When experiencing pride, women made significantly more restricted gifts (56%) than when experiencing love (14%; $\chi^2 = 8.68, p < .003$). Women experiencing love made fewer restricted gifts than those in the neutral condition ($\chi^2 = 3.55, p < .06$). No difference was found between neutral (44%; *NS*) and pride. However, men showed similar levels of restricted giving regardless of emotion condition (pride = 59%, love = 64%, and neutral = 48%; all $\chi^2 = NS$), see table 4.

The second dependent measure, domestic versus international relief fund designation, enabled me to test hypothesis 3d, which predicts that positive emotions high in social connection will lead individuals to prioritize giving to international relief. I hypothesized that participants experiencing love would give more to the American Red Cross international relief funds than those experiencing pride (i.e., participants experiencing pride would be more likely to prioritize domestic relief funds than those experiencing love). In the model predicting the propensity to give to the international relief fund, I found a significant effect for emotion, $\chi^2 = 6.14, p < .05$. Individuals experiencing love (love = 47%) were more likely to give to the international relief fund than those experiencing pride (pride = 33%, $\chi^2 = 3.79, p < .05$) or a neutral emotional state

(neutral = 28%, $\chi^2 = 5.36$, $p < .02$), see table 5. There was no effect for gender or interaction between gender and the emotion condition ($F < 1$).

Discussion

Study 3 demonstrated that different positive emotions lead to giving in distinctly different ways (e.g., restricted vs. unrestricted monetary gifts) and to different types of recipients (e.g., domestic vs. international relief funds). Using the social connection and perceived control appraisal dimensions, I predicted that individuals who felt love would make more unrestricted gifts and those who felt pride would make more restricted gifts (hypothesis 3c). I found support for hypothesis 3c particularly among women. I find a significant interaction between gender and emotion predicting more restricted monetary gifts given in response to a fundraising appeal from the American Red Cross. Specifically, I find that momentary pride increased the number of restricted gifts relative to momentary love (i.e., similarly, momentary love increased the number of unrestricted gifts relative to momentary pride) among women. Women feeling love made significantly more unrestricted gifts than those in both the pride and neutral conditions. Although the interaction was unexpected, it raises an interesting question as to when emotion effects are likely to be more or less pronounced

between genders (i.e., with particular emotion pairs or within particular consumption contexts).

In a test of hypothesis 3d, I predicted that individuals feeling love would be more likely to give to international relief (i.e., conversely, those experiencing pride would be more likely to give to domestic relief). Results from study 3 supported this hypothesis; I find a significant effect of emotion on the likelihood of donating to international relief. Specifically, individuals feeling love were more likely to give to international relief than those experiencing pride or a neutral emotional state. Recent findings suggest that men and women may respond differently to donation requests involving in-groups and out-groups (Winterich, Mittal, and Ross 2009); however, I found no gender differences in the likelihood of giving to domestic versus international relief funds.

Study 3 demonstrates that specific positive emotions, based on the appraisal profiles characterizing them, have unique behavioral effects within the same consumption context. These findings suggest that the emotional state potential donors are in not only influences whether they give but how they give (i.e., restricted vs. unrestricted gifts) and to whom they give (i.e., domestic vs. international). These findings have important implications for a host of

organizations, including universities and non-profits, which regularly allow donors to decide whether and how to direct monetary gifts.

Studies 2 and 3 demonstrate that specific positive emotions (hope, love, and pride) influence consumption behavior in distinct ways. These findings underscore the importance of characterizing positive emotions based on their unique patterns of appraisal to predict consequential consumption behaviors. These distinctions have real implications for marketing as well as public policy.

While some contexts allow for a specific positive emotion to be triggered in isolation, in other contexts consumers are regularly influenced by multiple emotions concurrently. This is particularly the case for positive emotions, for which greater emotional blending occurs (Ellsworth and Smith 1988). Since positive emotion blends are abundant (e.g., love and gratitude), it is particularly important to determine how these blends may influence behavior. Specifically, consumers may experience multiple positive emotions chronically (e.g., dispositional emotions) or in response to particular marketing efforts (e.g., television commercials). These examples highlight the importance of considering multiple emotions in concert based on their underlying patterns of appraisal. Thus, the next two studies focus on blends of positive emotion characterized by their underlying patterns of appraisal. Study 4 examines how the types of

positive emotion chronically experienced by consumers (measured) influence consumption behavior. Study 5 looks at how the types of positive emotion momentarily experienced while viewing television commercials (manipulated) influence subsequent consumption behavior.

Study 4: Different Positive Emotion Dispositions Influence Different Consumption Behaviors

Study 4 is designed to address how measured positive emotions (i.e., dispositional emotions) influence consumption behavior. Much research has focused on dispositional positive affect. A trait-level propensity toward experiencing generalized positive affect predicts marital satisfaction, social activity, and competence (Harker and Keltner 2001), success (Lyubomirsky, King, and Diener 2005), higher income and job satisfaction (Diener et al. 2002), and longevity (Danner, Snowdon, and Friesen 2001). Further, Shiota and colleagues find that differences in specific positive emotion dispositions are linked to differences in personality profiles and attachment style (Shiota, Keltner, and John 2006). For example, dispositional contentment and pride are positively associated with self- and peer-rated Extraversion, and dispositional love is positively associated with self- and peer-rated Agreeableness. However, this

work does not relate positive emotions to one another in terms of underlying appraisals and hence is less useful for examining how overall constellations of specific dispositional emotions will function to determine behavior. I will use the expanded appraisal framework from study 1 to characterize the effects of constellations of dispositional emotions.

One way to test the hypotheses regarding the role of appraisal dimensions in consumer choice is to determine the extent to which an individual sees the environment through a particular perceptual lens (Lerner and Keltner 2000). To the extent that a person experiences emotions associated with specific patterns of appraisal, he or she is more likely to have a tendency to appraise situations in a manner consistent with those appraisals. Lerner and Keltner (2001) have shown that such patterns emerge for both naturally occurring dispositional emotions and experimentally induced emotions.

Past research has employed dispositional measures to examine differences between two specific negative emotions (anger and fear) and their underlying appraisals (certainty and control; Lerner and Keltner, 2001). One research challenge that arises when focusing on specific emotions is how the differences found in the dependent measure can be attributed to the appropriate appraisal dimension. Since any given set of emotions has multiple, perhaps conflicting,

appraisal tendencies, it is potentially difficult to discern which appraisal tendency is driving any given result.

In the present research, I develop a new approach that characterizes emotional dispositions at the appraisal level. I consider multiple naturally occurring emotions and examine the “net” appraisal pattern experienced by a given individual to quantify the strength of the chronic lens for a particular individual on a specific appraisal dimension. Specifically, I measure the extent to which a given individual chronically experiences several dispositional emotions and then summarize appraisal tendencies across these dispositional positive emotions, essentially calculating an *appraisal disposition*. Details of this calculation are provided in the method section of this study. I believe that this appraisal disposition methodology demonstrates the usefulness of the appraisal approach by allowing me to summarize across various, potentially conflicting, specific emotion dispositions to predict consumption behaviors.

In study 4, I test the hypothesis that different appraisal dispositions will lead to different types of broadening behaviors. Specifically, I predict that individuals with a higher social connection appraisal disposition will be more willing to engage in socially conscious behaviors benefiting distant others (hypothesis 3a). I also predict that individuals with a higher problem-solving

appraisal disposition will consider more options (hypothesis 3b). I further predict a double dissociation such that a social connection but not a problem-solving appraisal disposition will predict more socially conscious behaviors benefiting distant others, and a problem-solving but not a social connection appraisal disposition will predict larger consideration sets.

Method

Participants and Cover Story. Eighty-two university students participated in a 30 minute study on feelings and consumer choice. My sample consisted of 44 females, 37 males, and one participant who left the gender question unanswered, ranging in age from 18 to 41. To disassociate the affect and emotion measures from the consumer behavior measures of interest, participants were told that different researchers had pooled together their respective questionnaire packets and that they would be completing three separate studies.

Procedure

In study 4, all participants completed the same measures. Participants first completed detailed emotion measures that enabled calculation of social connection and problem-solving appraisal dispositions. Next, they completed the

dependent measures for socially conscious consumption behaviors benefiting close and distant others as well as a consumer choice task to provide the measure of consideration set size. The order of these measures was counterbalanced.

Baseline Emotion. Since ambient mood is known to influence behavior, the Positive and Negative Affect Scale (PANAS; Watson, Clark, and Tellegen 1988) was administered to ensure that differences could be attributed to the dispositional measures of interest and not participants' pre-existing moods. Participants completed a modified version of the PANAS, indicating felt emotions at the "present moment." Participants completed the 26-item questionnaire on a 5-point scale, ranging from 1 = very slightly or not at all to 5 = extremely.

Emotion Measures. Next, each participant completed comprehensive measures for a series of dispositional positive emotions based on established scales, i.e. the Dispositional Positive Affect Scale (DPAS; Shiota 2004) and Dispositional Positive Emotion Scale (DPES; Shiota et al. 2006). The questionnaire contained 58 items, to which participants responded on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. The questionnaire enabled me to capture each individual's dispositional propensity to experience

the seven focal positive emotions: happiness, contentment, interest, hope, pride, love, and gratitude.

After completing the feelings and emotion questionnaire, participants received separately the second and third questionnaire packets with the dependent measures. The order of the two consumer survey tasks—a socially conscious consumption behaviors task and a camcorder selection task—was counterbalanced across participants. Participants were asked to complete demographic measures after each task to provide face validity for the cover story.

Socially Conscious Consumption Behavior Measures. The socially conscious consumption items were embedded in a larger consumer choice survey, as in study 2. Participants were told that researchers were interested in the likelihood that they would engage in various consumption behaviors over the coming year. The alphas for the four item dependent measures were $\alpha = .65$ for close others and $\alpha = .75$ for distant others.

Consideration Set Measures. The camcorder selection task was modeled after an existing measure of consideration set size (Diehl and Poynor 2007). Participants were asked to imagine that they had taken a new job and that one of their first tasks was to buy a camcorder for a project. Participants were presented

with descriptions of 32 possible camcorders, including information on four attributes: weight, resolution, memory, and zoom. Their task was to indicate which of the 32 possible product options they would consider further, the dependent measure of interest. Finally, some additional scale and demographic items were measured.

Calculation of Appraisal Dispositions. I sought to leverage appraisal theory by determining the chronic prominence of focal appraisal dimensions (i.e., social connection and problem-solving) for each participant. I did so by characterizing each participant's overall array of reported dispositional positive emotions. Specifically, for each appraisal disposition I weighted each dispositional emotion (measured by the relevant DPES subscale) by its location on the relevant appraisal dimension as measured in study 1 and reported in table 2. Recall that these locations captured the degree to which each emotion is associated with, or characterized by, each appraisal. In doing so, I was able to calculate a unique score for each participant summarizing the array of his or her positive emotions in terms of the underlying appraisals. Specifically, I created scores capturing the focal appraisal dispositions for social connection and problem-solving. In the following equations, the W variables represent a standardized weight for the

focal appraisal from study 1. The M variables represent the participant's own mean level of the focal dispositional emotion.

$$\text{Social Connection Appraisal Disposition Score} = \sum [W_{SC\text{-happiness}} (M_{\text{happiness}}) + W_{SC\text{-contentment}} (M_{\text{contentment}}) + W_{SC\text{-interest}} (M_{\text{interest}}) + W_{SC\text{-hope}} (M_{\text{hope}}) + W_{SC\text{-pride}} (M_{\text{pride}}) + W_{SC\text{-love}} (M_{\text{love}}) + W_{SC\text{-gratitude}} (M_{\text{gratitude}})]$$

$$\text{Problem-Solving Appraisal Disposition Score} = \sum [W_{PS\text{-happiness}} (M_{\text{happiness}}) + W_{PS\text{-contentment}} (M_{\text{contentment}}) + W_{PS\text{-interest}} (M_{\text{interest}}) + W_{PS\text{-hope}} (M_{\text{hope}}) + W_{PS\text{-pride}} (M_{\text{pride}}) + W_{PS\text{-love}} (M_{\text{love}}) + W_{PS\text{-gratitude}} (M_{\text{gratitude}})]$$

Results

Preliminary Analyses. Variance in baseline affect did not qualify any of the main findings, and survey order had no effect. For consistency across studies, ethnicity was included as a covariate; however, its effect was non-significant in this study. Thus, these variables will not be discussed further. Preliminary analyses on the dispositional emotion measures showed that the measured emotion subscales were reliable: happiness ($\alpha = .76$), contentment ($\alpha = .85$), interest ($\alpha = .80$), hope ($\alpha = .81$), pride ($\alpha = .74$), love ($\alpha = .80$), and gratitude ($\alpha = .71$).

Hypothesis Tests. Four regression models were run using the social connection and problem-solving appraisal disposition scores to test hypotheses

1, 2, 3a, and 3b and demonstrate dissociation between the dependent measures of interest.

In the first regression, I tested hypothesis 1 using social connection appraisal disposition as the independent variable. I predicted that a) individuals high in social connection would be significantly more likely to engage in socially conscious consumption behaviors benefiting more distant others relative to those benefiting close others than individuals low in social connection and b) individuals high versus low in social connection would show less of a difference for behaviors benefiting close others. In the model predicting the reported likelihood of engaging in socially conscious consumption behaviors, I find that social connection is positively related to socially conscious consumption behavior ($B = 0.43$; $F(1, 79) = 7.78$, $p < .007$). I also find that the within subject effect for social distance is a significant predictor of socially conscious consumption behavior ($M_{\text{close}} = 5.2$ and $M_{\text{distant}} = 3.2$; $F(1, 80) = 208.97$, $p < .0001$). Most importantly, social distance significantly moderated the effect of social connection on likelihood to perform socially conscious consumption behaviors, $F(1, 80) = 4.06$, $p < .05$. More specifically, the coefficient for social connection was significant for behaviors benefiting distant others ($B_{\text{distant}} = 0.63$, $F(1, 80) = 11.80$, $p < .001$) but not close others ($B_{\text{close}} = 0.22$, $F(1, 80) = 1.46$, *NS*). This significant

interaction (see figure 2) supports the appraisal tendency disposition prediction that individuals with higher social connection appraisal disposition scores are more likely to engage in socially conscious behaviors benefiting more distant others.

I also tested whether individuals with higher problem-solving appraisal dispositions would consider more options in consumer choice (hypothesis 2) by regressing the total number of options considered on the problem-solving scores. As expected, I found that problem-solving was a significant predictor of consideration set size ($B = 0.97$; $F(1, 79) = 6.25$, $p < .01$).

Hypotheses 3a and 3b specified a stronger test of the appraisal disposition approach by predicting a dissociation between the effects of social connection and problem-solving appraisal dispositions. To test these hypotheses, I simultaneously entered both the social connection and problem-solving appraisal disposition scores into regression equations and used Type III Sums of Squares so that each effect was tested controlling for the other. I tested hypothesis 3a, the likelihood that social connection but not problem-solving was a significant predictor of the likelihood to perform socially conscious behaviors that benefit more distant others, by regressing the distant other behaviors dependent variable on both the social connection and the problem-solving scores. The results

revealed that social connection ($B = .65; F(1, 78) = 10.65, p < .002$), but not problem-solving ($B = .03; F(1, 78) < 1, NS$), was a significant predictor of the likelihood to perform socially conscious consumption behaviors that benefit distant others. Regression lines predicting intentions to perform behaviors benefiting distant others based on standardized appraisal dispositions were plotted in figure 3. This pattern of results also held when social connection had the opportunity to explain all of the variance.

Finally, I tested hypothesis 3b, the likelihood that problem-solving would be a significant predictor of consideration set size. I regressed the total number of product options considered on both the social connection score and the problem-solving score. The results revealed that problem-solving ($B = .84; F(1, 78) = 4.12, p < .05$), but not social connection ($B = -.54; F(1, 78) < 1, NS$), was a significant predictor of the number of options considered. Regression lines predicting number of options considered based on standardized appraisal dispositions were plotted in figure 4.

Discussion

These results demonstrate that different appraisal dispositions lead to different types of broadening behaviors. In study 4, I used appraisal findings

from study 1 in conjunction with individuals' dispositional positive emotion scores to calculate appraisal dispositions for social connection and problem-solving. Using these appraisal dispositions, I linked specific appraisal tendencies with different types of broadening important to consumption behavior. I find that social connection but not problem-solving predicts an increased likelihood of engaging in socially conscious consumption behaviors that benefit more distant others. I also find that problem-solving but not social connection predicts larger consideration set sizes.

Study 4 further demonstrates the importance of characterizing positive emotions based on their underlying appraisals. This study shows that the types of positive emotion consumers chronically experience predict enduring patterns of behavior. Namely, the blend of positive emotions experienced by a consumer forms an appraisal disposition which acts as an important lens. An interesting question is whether manipulated blends of momentarily experienced positive emotions (e.g., hope and interest) can similarly form this type of appraisal-based lens (e.g., problem-solving) which predicts behavior. In study 5, I examine how television commercials activate specific positive emotion blends characterized by particular patterns of appraisal and show how they influence subsequent behavior.

Study 5: Television Commercials Activate Appraisals and Influence Environmental Behaviors

The goal of study 5 was to demonstrate the unique broadening effects of distinct types of positive emotion blends within a single consumption context using emotion-inducing stimuli which occur naturally within consumers' everyday environments. Leveraging the appraisal findings from studies 1 and 4, I designed study 5 to test whether the appraisal tendencies which characterize distinct types of positive emotion could be triggered by brief television commercials and subsequently influence behavior completely unrelated to the consumption context or brands featured in the commercials. A second goal of study 5 was to demonstrate the influence of specific positive emotion blends within the same domain of behaviors examined in my previous studies (i.e., socially conscious consumption behaviors). Studies 2 – 4 demonstrate how positive emotions high in social connection increase socially conscious behaviors benefiting distant others. In these studies, increasing these behaviors relies on an individual's expanded sense of self or circle of concern. However, not all socially conscious behaviors share this characteristic nor are they necessarily best motivated in the same way. Specifically, socially conscious behaviors can vary not only in terms of whether they create a sense of connection but also in terms

of the amount of energy or effort required. Other classes of socially conscious behaviors, particularly environmental actions, require individuals to exert more continuous energy and effort, thus making the problem-solving appraisal dimension of positive emotions crucial.

In study 5, I test the hypothesis that a television commercial which triggers problem-solving emotions (i.e., hope and interest) will lead to more effortful environmental behaviors than a commercial which triggers social connection emotions (i.e., love and gratitude). In the previous studies I have shown that social connection emotions (e.g., love) increase engagement in socially conscious behaviors that benefit more distant others. In this study, I show that problem-solving emotions (e.g., hope and interest) will increase the number of different effortful environmental actions that individuals are willing to take within the domain of socially conscious consumption behaviors. Thus, study 5 is designed to show that specific types of positive emotions (e.g., social connection vs. problem-solving) do more than simply motivate behavior in a particular consumption domain. Rather, specific types of positive emotion can actually differentially increase distinct types of socially conscious behavior (e.g., purchasing a product that benefits refugee families vs. bringing reusable bags to the supermarket).

Method

Participants and Set-up. 193 university students participated in a 10 minute study on feelings and consumer choice. The sample consisted of 126 males and 80 females ranging in age from 18 to 29. Participants were told that they would be viewing a commercial, reporting their feelings, and then completing a choice task and background questions.

Procedure

Study 5 consisted of a 3 positive emotion blend/ appraisal type commercial (problem-solving/ social connection/ control) between subjects design. Participants were randomly assigned to one of the three conditions.

Emotion Blend/Appraisal Induction. Each participant viewed one of three commercial clips selected to induce a specific positive emotion appraisal type. Both of the pre-tested positive emotion blend commercials featured a sports context. The problem-solving commercial consisted of a Nike commercial featuring a series of athletes working out and training for their respective sports (e.g., basketball, swimming, gymnastics, running, soccer). The social connection commercial consisted of a Johnson & Johnson commercial from the “Thanks Mom” Olympic Games campaign featuring swimmer Cullen Jones talking about

his mother's support being key to his opportunity to compete in the Olympics. The control commercial featured an accelerated time-lapse video of a plant growing from seed to adult plant.

Appraisals and Emotion Check. After viewing the commercial clip participants were asked to report on their thoughts and feelings in response to the commercials viewed. They were asked to report the extent to which they thought about or felt the two focal appraisals (i.e., problem-solving and social connection) while viewing the commercial. Both the problem-solving ("needing to expend effort or overcome obstacles before getting something important") and the social connection ("being closer or more connected to another individual or a group") items were answered on a 9-point scale, where 1 = not at all and 9 = very much. As an emotion check, participants also reported on the extent to which the commercial made them feel the focal positive emotion blend states. The problem-solving commercial was found to be high in hope and interest but not love and gratitude; the social connection commercial was high in love and gratitude but not hope and interest, as expected (see table 6). An overall positivity score was created for each participant based on an average of the positive emotions which were reported on a 9-point scale, where 1 = not at all and 9 = very much.

Environmental Actions. After reporting their feelings in response to the commercials task, participants were presented with the choice task. They were provided with a list of 15 environmental consumption behaviors, which had been pretested for the amount of effort or energy they required. Sample items include: “Check your car’s tire pressure regularly and keep tires adequately inflated”; “Unplug electronics and small household appliances when they are not in use”; “Bring reusable cloth bags to the grocery market, as opposed to using plastic or paper bags.” Note that the emphasis of these items is on more effortful behavior requiring energy and action on the part of the consumer. Participants were asked to “indicate which behaviors you will commit to do over the coming year.” These items were pretested with a group of college students ($N = 28$) who rated them as more effortful behaviors that solved environmental problems relative to the full list of environmental behaviors provided. Participants placed a check next to each behavior they committed to do, and the total number of environmental actions checked comprised the final dependent measure. This measure captured the extent to which individuals were willing to engage in a wide variety of effortful environmental actions.

Results

Preliminary Analyses. As in study 3, an overall positivity score was created for each participant based on the average of all five positive emotion items ($\alpha = .93$). The inclusion of this overall positivity score allows for a more stringent test of the effect of appraisals on behavior. Initial analyses revealed a significant effect for age, gender, and overall positivity, none of which interacted with the emotion blend manipulation. Specifically, women, older individuals, and those who reacted more positively to the commercial indicated a greater propensity to perform environmental actions regardless of emotion blend condition. All were included as covariates in the tests of hypotheses. To ensure that the magnitude of positivity did not explain differences found between conditions, it was included as a covariate in the manipulation checks as well.

Tests on self-reported appraisals of problem-solving ($F(2, 189) = 15.85, p < .0001$) and social connection ($F(2, 189) = 13.97, p < .0001$) in response to the commercials revealed significant emotion/ appraisal induction effects. The problem-solving commercial was seen as higher in problem-solving appraisals than the social connection commercial ($M_{\text{problem-solving}} = 5.3, M_{\text{social connection}} = 3.8, (F(1, 189) = 16.19, p < .0001)$) and the control commercial ($M_{\text{control}} = 3.2, (F(1, 189) = 21.80,$

$p < .0001$). The social connection commercial was seen as higher in social connection appraisals than the problem-solving commercial ($M_{\text{social connection}} = 5.7$, $M_{\text{problem-solving}} = 4.1$, $(F(1, 189) = 23.42, p < .0001)$ and the control commercial ($M_{\text{control}} = 3.6$, $(F(1, 189) = 19.04, p < .0001)$).

Hypothesis Tests. Hypothesis 4 predicted that problem-solving but not social connection will lead to more effortful behavior in the same consumption context, in this case effortful environmental actions. In the model predicting the total number of different environmental actions, I found a significant effect for commercial condition, $F(5, 187) = 3.65, p < .03$. As predicted, those who viewed a problem-solving commercial committed to significantly more environmental actions than those who viewed the social connection commercial, ($M_{\text{problem-solving}} = 5.5$, $M_{\text{social connection}} = 4.4$, $F(1, 187) = 4.92, p < .03$). No significant difference was found between the problem-solving and control commercial ($M_{\text{control}} = 6.1$, *NS*).

A mediation analysis was conducted using the recommended bootstrapping technique for testing indirect effects (Preacher and Hayes 2004). The bootstrapped estimate of the indirect effect was significant ($z = 1.65, p < .05$). This evidence suggests that appraisals of problem-solving mediate the relationship between positive emotion blend type and environmental behaviors (see figure 5).

Discussion

Study 5 demonstrates that different types of positive emotion blends (e.g., social connection emotions vs. problem-solving emotions) lead to different behaviors, particularly different types of socially conscious consumption behaviors. These findings show that momentary positive emotion blends experienced while viewing a television commercial can change subsequent behavior in a consumption domain entirely unrelated to the emotion elicitation. Specifically study 5 shows that a positive problem-solving commercial increases consumer engagement in effortful environment actions more than a positive social connection commercial. In addition, I find evidence that problem-solving appraisals mediate the relationship between positive emotion blend type and engagement in environmental behaviors.

GENERAL DISCUSSION

Summary of Results

Together five studies demonstrate that positive emotions can be characterized in ways that allow prediction of specific consumption behaviors. I find that different positive emotions lead to distinct types of broadening due to differences in appraisal dimensions. In study 1, inclusion of a fuller range of positive emotions (e.g., contentment, gratitude, and love) and appraisal dimensions specifically important to positive emotions (e.g., adding social connection and temporal focus) allows better differentiation among positive emotions. Study 1 shows that positive emotions can be reliably distinguished along multiple dimensions of appraisal, including problem-solving and social connection, which explain the most variance among the positive emotions considered.

Studies 2 - 5 show that both manipulated and measured positive emotions characterized by different appraisal tendencies lead to different patterns of consumption behavior. In study 2, I find that love and hope influence socially conscious consumption behaviors benefiting close and distant others in different

ways. Study 2 demonstrates that positive emotions high in social connection (e.g., love) lead to more socially conscious consumption behaviors benefiting distant others than low social connection positive emotions (e.g., hope) but both hope and love similarly increase behaviors benefiting close others. In addition, I find evidence that the relationship between positive emotions and behaviors benefiting distant others is mediated by breadth of social connection. In study 3, I find that love and pride lead to distinct forms of giving in response to fundraising appeals, particularly in terms of the type of monetary gift given (i.e., restricted vs. unrestricted) and the recipients chosen to receive those gifts (i.e., domestic vs. international funds). Study 3 shows that positive emotions high in perceived control/ low in social connection (e.g., pride) lead to more restricted giving than low perceived control/ high social connection positive emotions (e.g., love) among women. In addition, high social connection positive emotions (e.g., love) make gifts to international relief funds more likely than low social connection positive emotions (e.g., pride).

Studies 4 and 5 highlight the importance of positive emotion blends characterized by their underlying patterns of appraisal. Study 4 demonstrates that a problem-solving but not social connection appraisal disposition leads to larger consideration set sizes and that social connection but not a problem-

solving appraisal disposition predicts the likelihood of engaging in socially conscious consumption behaviors that benefit more distant others. Study 5 shows that a problem-solving commercial but not a social connection commercial leads to more effortful environmental actions (e.g., reducing energy use and bringing reusable bags to the grocery store). In addition, I find evidence that the relationship between type of positive emotion blend and environmental behaviors is mediated by problem-solving appraisals. Across studies 2 - 5, I leverage the notion of appraisals to develop theory and measurement linking positive emotions to specific types of broadening behaviors.

I also introduce a new methodology for taking into account multiple appraisal dimensions underlying specific emotions and introduce the concept of appraisal dispositions. More specifically, by accounting for the extent to which a consumer regularly experiences an array of emotions, I am able to measure which appraisal dimensions are most likely to be chronically active and serve as a lens affecting how individuals perceive and respond to their situation or environment. Using appraisal dispositions and positive emotion blends, I provide a more stringent test of the importance of conceptualizing positive emotions' effects in terms of underlying appraisals. The newly revealed patterns of appraisal underlying specific positive emotions can be used not only to predict

responses to a single momentary emotion but also to predict patterns of behavior linked to the constellations of emotions that a consumer experiences regularly or to specific positive emotion blends induced by environmental factors. Thus, the appraisal disposition methodology and use of momentary positive emotion blends further validate theorizing about the differences between specific positive emotions by characterizing those emotions in terms of underlying appraisals.

Theoretical Contributions

This research offers an integrated approach for understanding positive emotions. I bring together two important emotion theories—appraisal theory and the broaden-and-build theory of positive emotions—to provide a more nuanced view of the effects of specific positive emotions and different appraisal tendencies. I argue that specific positive emotions can serve to broaden attention, thought, and action in different ways and suggest that these different forms of broadening can be explained through the different appraisal dimensions characterizing different positive emotions.

I find that positive emotions can be distinguished based on underlying appraisals. I also find that the appraisal dimensions that explain the most variance in positive emotions are distinct from those found to explain the most

variance in negative emotions, e.g., social connection, an appraisal dimension not heretofore recognized as important, has a critical role in distinguishing positive emotions. Specifically, appraisals of certainty and control, which have been important to understanding differences in anger, fear, and sadness, are less central to explaining variance amongst positive emotions. These findings offer a richer understanding of the appraisal dimensions central to differentiating positive emotions.

I demonstrate that specific positive emotions predict different patterns of consumption behavior (e.g., consideration of more options or effortful behaviors vs. behaviors benefiting distant others or donations to international relief). I show that different momentary positive emotions as well as momentary positive emotion blends differentially predict these consumption behaviors. I also show that chronic experiences of positive emotions predict enduring patterns of behavior. My technique for calculating appraisal disposition scores allows researchers to assess multiple appraisal dimensions concurrently and determine which appraisal dimension is most predictive of observed behavior. I show that chronic appraisal dispositions also predict distinct broadening behaviors. This approach is both a conceptual and a methodological contribution to appraisal theory and appraisal tendency approaches.

Finally, I provide the first empirical demonstration of *differential broadening*, showing that specific positive emotions broaden in distinctly different ways. I show that emotions characterized as high in breadth of social connection (e.g., love) increase behaviors benefiting distant others, whereas emotions characterized as high in degree of problem-solving (e.g., hope) increase consideration set size and commitments to more effortful consumption behaviors. This demonstration of differential broadening is a contribution to the broaden-and-build theory of positive emotions.

Marketing Implications

Specific positive emotions and their associated appraisals have important implications for consumption behavior. My research suggests that the ways in which consumers regularly appraise situations have important downstream consequences for the extent to which they a) engage in socially conscious consumption behaviors that benefit more distant others, b) commit to effortful environmental actions, c) consider more choice options, and d) give different types of monetary gifts in response to fundraising appeals. This research also suggests that marketers need to be more cognizant of the specific positive

emotions that their consumers may be experiencing both momentarily and chronically.

Marketers have many tools at their disposal to influence specific momentary emotions, but they need to be strategic and identify the specific positive emotions activated by their marketing communications and store environments. They need to examine which types of positive emotion may be triggered by the text, imagery, music, and personnel that they select for promoting their products and brands. If marketers use the right positive emotions, they could be well on their way to achieving their strategic objectives. If, however, they use the wrong positive emotions, they could end up undermining those same objectives.

It is not the case that one positive emotion is universally better at motivating behavior than another. Rather, the effectiveness of each positive emotion depends on the goal of the manager, particularly what type of behavior the manager or policy maker wants to motivate. For example, a retailer could employ emotions likely to increase the number of products a consumer considers purchasing or the amount of effort a consumer is willing to expend (e.g., hope) or emotions likely to increase a consumer's sense of connection to store personnel or a brand (e.g., love). In the social marketing context, a public health campaign

aimed at encouraging the consumer to consider additional choice or behavior options could use hope, whereas a conservation campaign benefiting distant others could be more effective using love. For a related example focusing on the effects of self and other in health messaging, see Agrawal et al. (2007). While all positive emotional themes will make consumers feel positively, all positive emotional themes will not motivate the same types of consumption behavior.

Based on my characterizations, marketing managers and policy makers can strategically use different palettes of specific positive emotions to promote desired behaviors. Namely, multiple positive emotions (e.g., hope and interest) may be characterized by the same appraisal tendency (e.g., problem-solving), but each of those emotions is not necessarily suitable or attainable for a given brand, product category, or context. The concept of palettes of positive emotion allows marketers to strategically select from a group of emotions one that is appropriate for a given situation.

The positive emotion palette concept further suggests that marketers cannot employ a “one-size fits all” approach in selecting emotional themes. Specifically, marketers need to be sensitive to contextual contingencies, such as the product category and particular retail environment. For example, in product categories where multiple purchases are possible (e.g., apparel), using a

problem-solving emotion to increase the consideration set and potentially the number of products a consumer sees as purchase-worthy is probably desirable. However, in product categories where a single purchase is more prevalent (e.g., a digital video recorder), using that same emotion may cause the consumer to broaden search beyond the retailer's own brand or store, probably not so desirable.

Contextual contingencies are especially important in retail environments. Marketers may need to use different creative materials to evoke appropriate emotional themes based on the environmental context and the brand's position in the marketplace. Specifically, a marketer would be remiss to use the same emotional advertisement or display in a brand's flagship store and a big box store where the brand is sold. For example, using a hope-themed Nike advertisement (that broadens consideration set) at Niketown may increase Nike sales; however, using the same advertisement at Foot Locker may actually decrease category leader (Nike) sales, as consumers may broaden beyond the Nike brand to consider other competitive brands (e.g., Adidas, Asics) sold in the store. Conversely if the brand is in a follower position, using a hope-themed advertisement in a big box store may be strategically advantageous.

Marketers can also be more sophisticated in their use of multiple emotions and strategic sequencing of emotions, particularly in communications over time. For example, it may be advantageous for companies who rely on personal selling (e.g., Avon) to employ a socially connected emotion (e.g., love) early to secure a consumer and then use a problem-solving emotion (e.g., hope or interest) to encourage a consumer to consider a broader range of products or services. Retailers and experiential marketers could also employ sequences of emotion to strategically move consumers through different zones of a retail space. For marketers of citizen action initiatives, there may be instances in which a sequence of emotions could be employed to influence consumption decisions and improve consumer welfare. For example, a policy initiative aimed at resource conservation may be more effective if marketers were able to first activate heightened social connection appraisals (via love) followed by problem-solving appraisals (via hope or interest). Specifically, policy communications may need to first help citizens feel more socially connected to distant others who may benefit from their actions and then motivate citizens to broaden their consideration of actions that could be taken to achieve that goal as well as exert effort to carry out those actions.

Similarly, social connection appraisals might moderate the effects of identifiable versus statistical victims on charitable giving (Small and Loewenstein 2003). In particular, higher social connection might decrease the normal differential in giving between identifiable and statistical victims by increasing giving to statistical victims (as opposed to decreasing giving to identifiable victims; Small, Loewenstein, and Slovic 2007). More generally, social connection appraisals may moderate effects associated with social distance forms of psychological distance (Trope, Liberman, and Wakslak 2007), with particular influence on psychologically distant conditions. Social connection may also be important to consumers' decisions to engage in brand relationships (Fournier 1998) and participate in brand communities (Muniz and O'Guinn 2001). Attention to not only consumers' momentary emotional experiences but also their chronic emotional experiences may prove to be particularly fruitful in these contexts.

In addition, appraisal dispositions offer a potentially useful tool for segmentation. Namely, marketers know that people vary in cognitive styles and have used that information in conjunction with zip code data to target consumers. Similarly there is interesting work that could be done tying appraisal dispositions to key demographic and psychographic variables (e.g., gender and

life stage), in order to more effectively tailor marketing offers and policy efforts based on knowledge of the emotional profiles of different consumer segments.

These insights on the appraisal dimensions characterizing positive emotions could lead to more effective communications strategies and marketing campaigns enabling marketers to strategically match the correct positive emotion to appropriate domains of desired behavior. These findings have important implications for advertising, personal selling, in-store design, and marketing communications.

Future Research

Future research should examine the temporal focus dimension revealed in study 1, as it has important implications for consumer decision making. For instance, when experiencing happiness (present-focused), an individual might place greater weight on present benefits and less weight on future costs, whereas an individual experiencing hope (future-focused) may place less weight on present costs and more weight on future benefits when making a decision. To the extent that different positive emotions are characterized by a temporal focus dimension, they may engender different temporal construals (Liberman and Trope 1998). Thus, differences in temporal focus may have implications for

consumer purchase intentions, product satisfaction, timing of product fulfillment decisions, as well as health prevention and health risk behaviors.

Consumer hope may be a particularly important, albeit complex, area for future research. Researchers suggest that differing levels of involvement and intensity of hope will impact attitude formation processes and product choices (MacInnis and de Mello 2005). Empirical findings show that threats to hope lead to motivated reasoning about products (De Mello et al. 2007). While my new appraisal findings suggest that hope may facilitate consumer problem-solving tendencies, additional research is needed to understand when consumer hope will be an asset versus a detriment to choice quality.

Both marketers and consumers need to understand the importance of how different positive emotions and different appraisals influence consumption behaviors in different ways. By understanding how different positive emotions influence consumers, marketers can do more than just make consumers *feel good*, they can also help consumers *do better* for themselves and for others.

TECHNICAL APPENDIX TO STUDY 1

Sorted Rotated Component Loadings of the Principal Components Analysis with Scree Reorder

Scale	Component							Communality
	1 Problem- Solving	2 Social connection	3 Attention/ Pleasant	4 Control	5 Certainty	6 Temporal Focus	7 Situational Control	
exert	0.84	.	.	.	.	.	.	0.74
effort	0.79	.	.	.	.	.	.	0.63
obstacle	0.77	.	.	.	.	.	.	0.73
problem	0.74	.	.	.	.	.	.	0.63
uncertainty	0.61	.	.	.	.	.	.	0.65
close	.	0.92	.	.	.	.	.	0.89
thought	.	0.90	.	.	.	.	.	0.83
connected	.	0.86	.	.	.	.	.	0.84
other-resp	.	0.54	.	-0.53	.	.	.	0.71
attend	.	.	0.82	.	.	.	.	0.78
consider	.	.	0.78	.	.	.	.	0.73
enjoy	.	.	0.74	.	.	.	.	0.85
pleasant	.	.	0.70	.	.	.	.	0.85
self-resp	.	.	.	0.81	.	.	.	0.70
self-control	.	.	.	0.70	.	.	.	0.61
other-	.	.	.	-0.63	.	.	.	0.76
control	.	.	.	.	.	.	.
understand	.	.	.	.	0.77	.	.	0.71
predict	.	.	.	.	0.68	.	.	0.59
past	.	.	.	.	.	0.77	.	0.64
future	.	.	.	.	.	0.47	.	0.61
present	.	.	.	.	.	-0.47	.	0.56
situ-control	.	.	.	.	.	.	0.81	0.71
Eigenvalue	5.00	3.96	2.05	1.42	1.24	1.06	1.01	
Variance	3.57	3.07	2.77	2.15	1.62	1.34	1.22	

Note: For clarity the component loading matrix has been arranged so that the columns appear in decreasing order of variance explained by components. The rows have been arranged so that for each successive component, greater loadings appear first. Loadings less than 0.50 have been omitted.

The factor pattern for the PCA revealed a 7-dimensional solution. The first PCA dimension, explaining the most variance among the positive emotions, was a hybrid dimension I label problem-solving, which reflects anticipated effort and goal-path items (both original to the Smith and Ellsworth study). This suggests that certain positive emotions are more likely than others to be associated with appraisals of requiring action or needing to expend effort in a goal-directed way. The second PCA dimension was one of my proposed dimensions, social connection, which represented the extent to which an individual feels connected to others. The third PCA dimension was another hybrid dimension consisting of attention and pleasantness items (original to the Smith and Ellsworth study), suggesting that certain positive emotions are more likely than others to be perceived as pleasant and absorbing in attention. The fourth and fifth PCA dimensions were control and certainty, two classic Smith and Ellsworth dimensions that have helped emotion researchers to understand important differences in negative emotions. The sixth PCA dimension represented my other newly proposed dimension, temporal focus, reflecting the extent to which an individual is focused on the present versus past or future. The seventh and final PCA dimension was situational control.

To further evaluate how specific positive emotions differ in their associated cognitive appraisals, component scores were computed for the PCA solution. Table 2 lists the mean scores (standardized for each dimension) for each emotion along the seven PCA dimensions and summarizes the way appraisals differ across the various emotions (see table 6 in Smith and Ellsworth 1985, p. 829). For example, hope and interest are high in problem-solving, whereas happiness, contentment, and pride are low in problem-solving. Love is a high social connection emotion, whereas interest, hope, pride, and contentment are low in social connection. Happiness and contentment are very present centered in their temporal focus, but hope and gratitude are not.

TABLES

Table 1: Appraisal Dimension Ratings Items

Dimension	Item	Item Wording
Pleasantness		
	Pleasant	How pleasant or unpleasant was it to be in this situation?
	Enjoy	How enjoyable or unenjoyable was it to be in this situation?
Attentional activity		
	Consider	Think about what was causing you to feel happy in this situation. While you were feeling happy, to what extent did you try to consider this thing further, or to what extent did you try to shut it out?
	Attend	Think about what was causing you to feel happy in this situation. When you were feeling happy, to what extent did you try to devote your attention to this thing, or divert your attention from it?
Control		
	Situational-Control	When you were feeling happy, to what extent did you feel that circumstances beyond anyone's control were controlling what was happening in this situation?
	Self-Control	When you were feeling happy, to what extent did you feel that you had the ability to influence what was happening in this situation?
	Other-Control	When you were feeling happy, to what extent did you feel that someone other than yourself was controlling what was happening in this situation?
Certainty		
	Understand	When you were feeling happy, how well did you understand what was happening around you in this situation?
	Uncertain	When you were feeling happy, how uncertain were

		you about what was happening in this situation?
	Predict	When you were feeling happy, how well could you predict what was going to happen in this situation?
Goal-path obstacle		
	Problem	Think about what you wanted when you felt happy in this situation. While you were feeling happy, to what extent did you feel there were problems that had to be solved before you could get what you wanted?
	Obstacle	Think about what you wanted when you felt happy in this situation. When you were feeling happy, to what extent did you feel there were obstacles standing in the path between you and getting what you wanted?
Responsibility		
	Self-Responsibility	When you were feeling happy, how responsible did you feel for having brought about the events that were making you feel happy in this situation?
	Other-Responsibility	When you were feeling happy, how responsible did you think someone or something other than yourself was for having brought about the events that were making you feel happy in this situation?
Anticipated effort		
	Exert	When you were feeling happy, to what extent did you feel that you needed to exert yourself to deal with this situation?
	Effort	When you were feeling happy, how much effort (mental or physical) did you feel this situation required you to expend?
Social connection		
	Close	When you were feeling happy, to what extent did you feel close or closer to another individual or group?
	Connected	When you were feeling happy, to what extent did you feel more connected to another individual or group?

	Thought	When you were feeling happy, to what extent did it affect the way you thought about your relationship with some individual or group?
Temporal focus		
	Present	At the time you were feeling happy, to what extent were you focused on the present?
	Past	At the time you were feeling happy, to what extent were you focused on the past?
	Future	At the time you were feeling happy, to what extent were you focused on the future?

Note: The table uses happiness as an example.

Table 2: Emotion Locations for Appraisal Dimensions

Emotion	Appraisal Dimension						
	Problem-Solving	Social Connection	Attention/Pleasant	Control	Certainty	Temporal Focus	Situational Control
Happiness	-0.51	0.36	0.52	0.28	0.27	-0.65	0.12
Contentment	-0.48	-0.27	-0.40	0.56	0.14	-0.38	0.01
Hope	0.85	-0.33	-0.41	-0.34	-0.48	0.91	-0.02
Love	-0.32	0.73	0.26	-0.21	0.15	-0.11	0.21
Pride	-0.48	-0.30	0.29	0.87	0.19	-0.14	-0.29
Gratitude	0.10	0.21	-0.46	-0.62	-0.04	0.35	-0.07
Interest	0.76	-0.37	0.19	-0.55	-0.24	0.01	0.06

Note: Scores standardized for each appraisal dimension.

Table 3: Pattern of Means for Socially Conscious Consumption Behaviors Benefiting Distant Others and Close Others

Emotion	Distant Others	Close Others
Hope	3.1 ^a	5.5 ^c
Neutral	3.5 ^{a,b}	4.9 ^d
Love	3.8 ^b	5.5 ^c

Note: Planned contrast for distant others $M_{\text{love}} = 3.8$ vs. $M_{\text{hope}} = 3.1$, $F(1, 144) = 8.79$, $p < .004$; planned contrasts for close others $M_{\text{love}} = 5.5$ vs. $M_{\text{neutral}} = 4.9$, $F(1, 144) = 4.67$, $p < .03$, and $M_{\text{hope}} = 5.5$ vs. $M_{\text{neutral}} = 4.9$, $F(1, 144) = 4.99$, $p < .03$.

Table 4: Percentage of People Choosing to Make Restricted Donations

Gender	Love	Neutral	Pride
Men	64% (n=39)	49% (n=43)	59% (n=46)
Women	14% (n=28)	44% (n=25)	56% (n=27)

Note: Planned contrast for men = 57% vs. women= 37%, $\chi^2 = 8.06$, $p < .004$; pride = 58% vs. love = 43%, $\chi^2 = 4.33$, $p < .04$; pride vs. neutral = 47%, *NS*. Within women, pride = 56% vs. love = 14%, $\chi^2 = 8.68$, $p < .003$; pride vs. neutral = 44%, *NS*. Within women, love = 14% vs. neutral = 44%, $\chi^2 = 3.55$, $p < .06$. Within men, pride = 59%, love = 64%, and neutral = 48%; all $\chi^2 = NS$.

Table 5: Percentage of People Choosing to Donate a Majority of Funds to International Relief

Love	Neutral	Pride
47% ^a	28% ^b	33% ^b

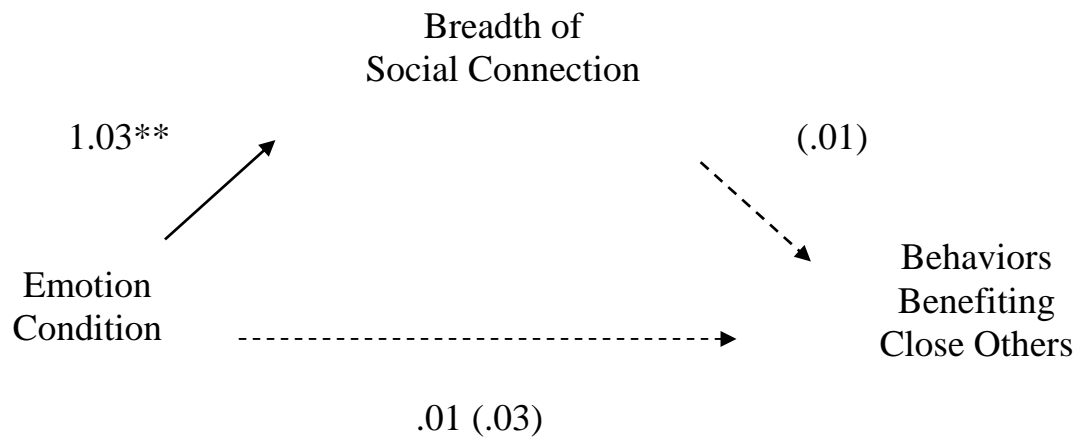
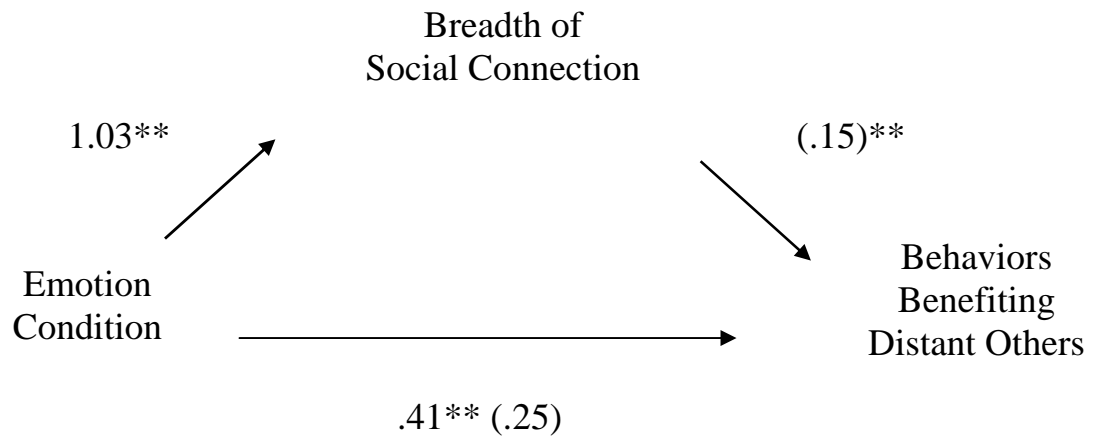
Note: Planned contrast for love = 47% vs. pride = 28%, $\chi^2 = 3.79$, $p < .05$; love = 47% vs. neutral = 28%, $\chi^2 = 5.36$, $p < .02$; neutral = 28% vs. pride = 33%, $\chi^2 < 1$, NS.

Table 6: Self-Reported Feelings in Response to Positive Emotion Blend Television Commercials

Emotion	Problem-Solving Commercial	Social Connection Commercial	Control
Happiness	5.9 ^a	5.8 ^a	5.6 ^a
Hope	5.8 ^a	4.7 ^b	5.6 ^a
Interest	6.3 ^c	4.8 ^b	5.5 ^a
Love	4.0 ^d	5.6 ^a	4.5 ^b
Gratitude	3.8 ^d	5.0 ^b	4.6 ^b
Neutral	4.2 ^d	4.2 ^d	5.3 ^a

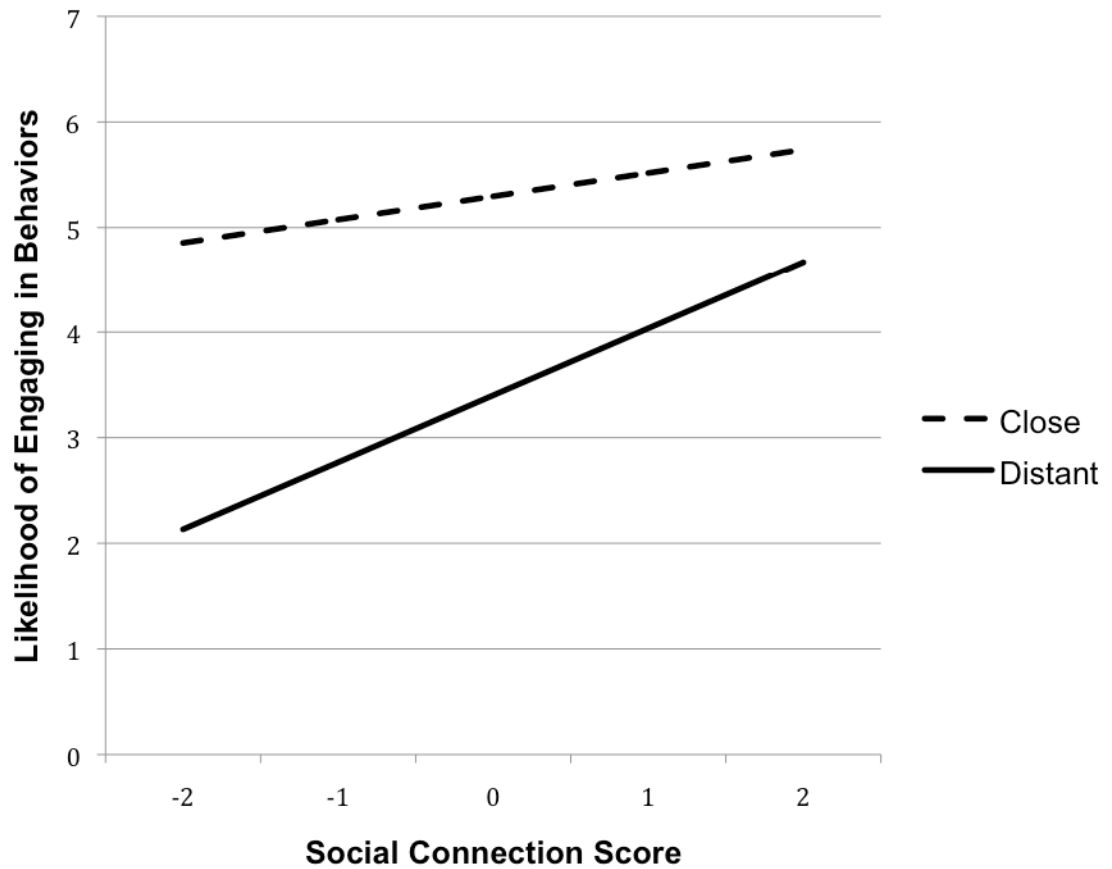
Note: Tests on self-reported feelings of hope ($F(2, 189) = 14.24, p < .0001$), interest ($F(2, 189) = 23.16, p < .0001$), love ($F(2, 189) = 26.67, p < .0001$), gratitude ($F(2, 189) = 15.26, p < .0001$), and neutral ($F(2, 189) = 2.13, p < .12$) revealed significant emotion induction effects. No difference was found for feelings of happiness ($M_{\text{problem-solving}} = 5.9, M_{\text{social connection}} = 5.8, M_{\text{control}} = 5.6, F < 1$). Participants in the problem-solving condition reported significantly higher feelings of hope ($M_{\text{problem-solving}} = 5.8, M_{\text{social connection}} = 4.7, F(1, 189) = 28.44, p < .0001$) and interest ($M_{\text{problem-solving}} = 6.3, M_{\text{social connection}} = 4.8, F(1, 189) = 43.85, p < .0001$) than those in the social connection condition. Problem-solving condition reported significantly higher levels of interest ($M_{\text{control}} = 5.5, F(1, 189) = 8.26, p < .005$) but not hope ($M_{\text{control}} = 5.6, NS$) than the control condition. The social connection condition reported significantly higher feelings of love ($M_{\text{social connection}} = 5.6, M_{\text{problem-solving}} = 4.0, F(1, 189) = 53.11, p < .0001$) and gratitude ($M_{\text{social connection}} = 5.0, M_{\text{problem-solving}} = 3.8, F(1, 189) = 26.86, p < .0001$) than those in the problem-solving condition. Social connection condition also reported significantly higher levels of love ($M_{\text{control}} = 4.5, F(1, 189) = 11.88, p < .0007$) but not gratitude ($M_{\text{control}} = 4.6, F(1, 189) = 1.24, p < .27$) than control condition. Control condition reported significantly more neutral feelings ($M_{\text{control}} = 5.3$) than those in the problem-solving ($M_{\text{problem-solving}} = 4.2$) and social connection conditions ($M_{\text{social connection}} = 4.2, F(1, 189) = 3.96, p < .05$).

Figure 1: Social Connection Appraisals Mediate Relationship Between Emotion and Behaviors Benefiting Distant Others



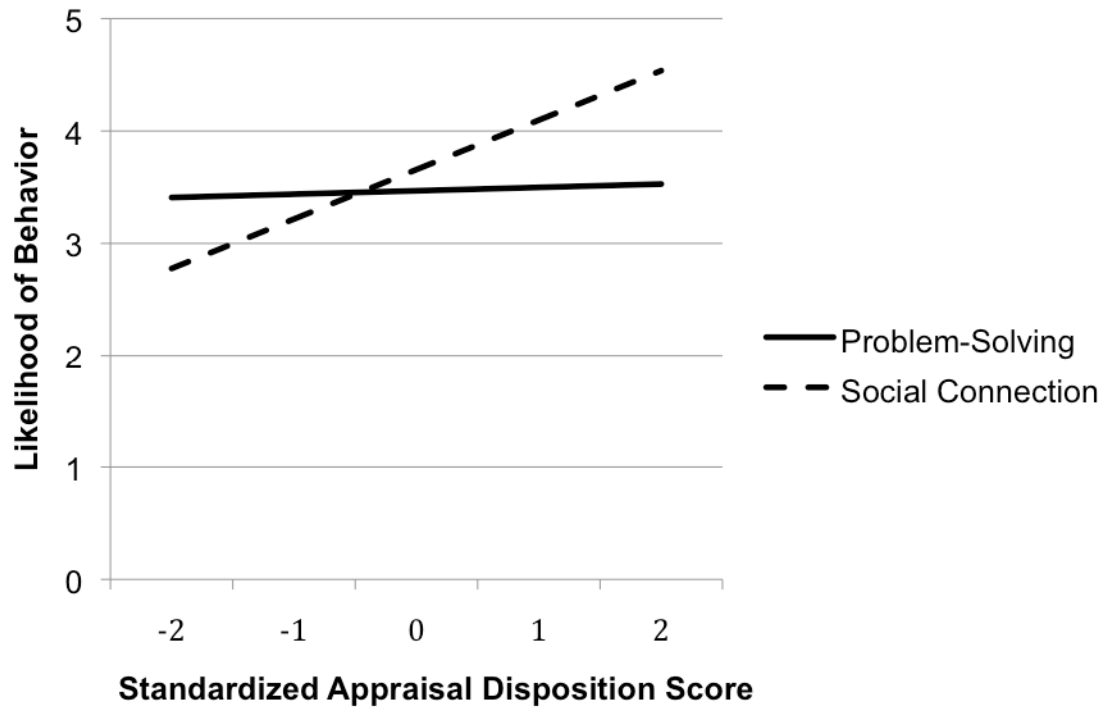
Note: Coefficients without parentheses represent parameter estimates for simple linear regression models. Coefficients in parentheses represent parameter estimates for a regression model containing both predictors. Double asterisks indicate parameter estimates different from zero at $p < .01$. Moderated mediation was tested using the bootstrapping technique; the conditional indirect effect was significant for distant ($z = 2.35, p < .02$) but not close others ($z < 1, NS$).

Figure 2: Social Connection Appraisal Disposition Predicts Intentions to Perform Socially Conscious Behaviors



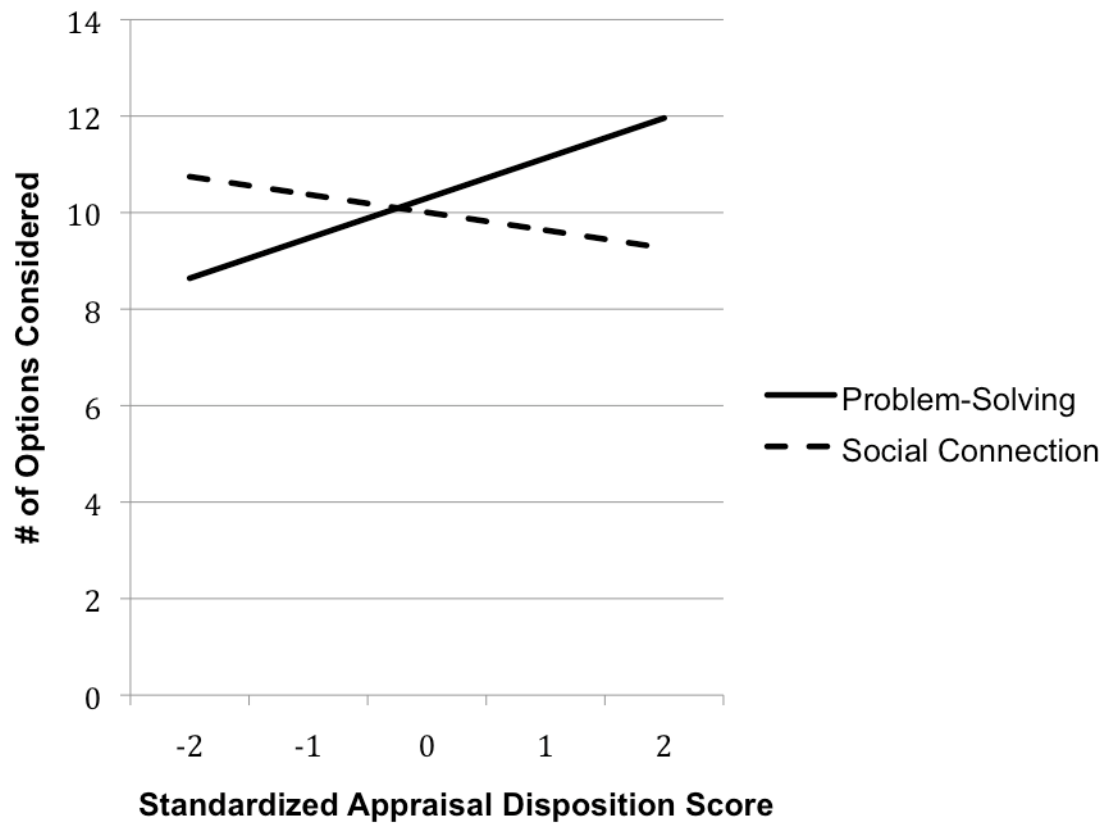
Note: Figure 2 depicts regression lines. The slopes are $B_{\text{distant}} = .63, p < .001$ and $B_{\text{close}} = .22, NS$.

Figure 3: Social Connection and Problem-Solving Appraisal Dispositions Predict Different Types of Consumption Behaviors: Likelihood of Behavior Benefiting Distant Others



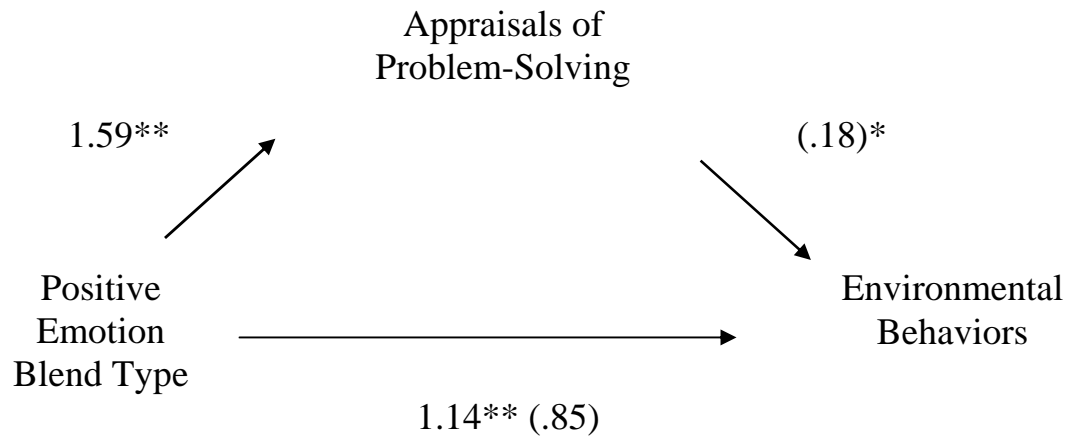
Note: Figure 3 depicts regression lines. The reported slopes are $B_{\text{social connection}} = .65, p < .002$ and $B_{\text{problem-solving}} = .03, NS$. Standardized appraisal disposition scores are plotted above: $B_{\text{social connection}} = .44, p < .002$ and $B_{\text{problem-solving}} = .03, NS$.

Figure 4: Social Connection and Problem-Solving Appraisal Dispositions Predict Different Types of Consumption Behaviors: Number of Options Considered



Note: Figure 4 depicts regression lines. The reported slopes are $B_{\text{problem-solving}} = .84, p < .05$ and $B_{\text{social connection}} = -.54, NS$. Standardized appraisal disposition scores are plotted above: $B_{\text{problem-solving}} = .83, p < .05$ and $B_{\text{social connection}} = -.37, NS$.

Figure 5: Problem-Solving Appraisals Mediate Relationship Between Positive Emotion Blend Type and Environmental Behaviors



Note: Coefficients without parentheses represent parameter estimates for simple linear regression models. Coefficients in parentheses represent parameter estimates for a regression model containing both predictors. Single asterisk indicates parameter estimate marginally different from zero; double asterisks indicate parameter estimates different from zero at $p < .05$. Mediation was tested using the bootstrapping technique; the indirect effect was significant ($z = 1.65, p < .05$).

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Biography

Lisa Cavanaugh is a native of the Great Lake State of Michigan. She was born in Rochester, Michigan and graduated as Valedictorian of Rochester High School, where she was a decorated four-year varsity letter winner, honored with a High School Heisman Award and named The Detroit News' Outstanding High School Graduate. Lisa went on to earn her Bachelor of Arts with Honors and Highest Distinction from Duke University, with an academic concentration in Public Policy and Markets & Management Studies.

Before pursuing her Ph.D. at Duke University, Lisa worked in Albuquerque, NM and Washington, DC for economic development and hunger relief organizations. In Washington, DC, she worked as the Manager of New Business Development for one of the nation's leading hunger relief organizations, Share Our Strength. Lisa was part of the team leading the launch of *The Great American Bake Sale*, which featured the first ever cover story on the issue of childhood hunger in PARADE Magazine and was the first to integrate a grassroots campaign into an ABC Television sitcom.

During her doctoral studies Lisa has been a member of the Unconscious Consumer Lab at Duke and Barb Fredrickson's Positive Emotion and

Psychophysiology Lab at the University of North Carolina. Lisa's research interests center on how emotions influence consumption decisions with consequences for individuals and society. More specifically, she examines how momentary emotions, chronically experienced emotions, and emotional cues in natural shopping environments shape consumers perceptions, decisions, and behaviors. Lisa's scholarly work has been published in the Journal of Consumer Psychology and the Journal of Business Research.

In 2007, Lisa was awarded the university-wide Dean's Award for Excellence in Teaching at Duke University. Lisa has also been honored as one of North Carolina's Strong Women Organizing Outrageous Projects, for her environmental conservation and community organizing accomplishments, and honored by the YWCA as a "Woman on the Move." She has served on the Markets & Management Advisory Board at Duke University and the Board of Directors for Peacecraft, a non-profit fair trade organization dedicated to helping cooperatives of artisans and farmers in developing communities. She currently lives in an eco-friendly co-housing community in Durham, North Carolina with her husband, Taymon Domzalski, and their trusty canine companion, Lucky.