

Situating moral sentiments:
Strategic emotion construction enables compassion avoidance

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ABSTRACT

C. DARYL CAMERON: Situated Moral Sentiments: Strategic Emotion Construction
Enables Compassion Avoidance
(Under the direction of Keith Payne)

According to the dominant view of moral emotions, emotions commit us to act pro-socially even at cost to ourselves. Yet constructionist models of emotion—which posit that discrete emotions emerge from core affect and emotion concepts—suggest that strategic construction may allow for malleability of moral experience. This dissertation examines whether motivations lead people to construct emotions consistent with their preferences. If people want to avoid pro-social behavior, they might conceptualize ambiguous affect as disgust rather than compassion. In Study 1, trait fear of compassion predicted less compassion and more disgust toward homeless individuals. In Study 2, priming fear of compassion increased donation avoidance. In Study 3, manipulating helping cost did not change explicit emotion or perceived similarity to weak groups; perceived helping cost and fear of compassion predicted more disgust and less compassion. Finally, Study 4 revealed strategic construction on implicit measures. In an approach-avoidance task, high cost increased impulsive avoidance of homeless for those high in fear of compassion. In an affect misattribution procedure, emotional granularity predicted less compassion when high cost had been imposed. Strategic emotion construction is possible, but may depend on whether motivation is measured or manipulated, and on whether compassion is measured explicitly or implicitly.

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...And of course, this section was going to be 3 pages long.

Table of Contents

List of Figures.....	viii
Chapter	
I. Introduction.....	1
II. Literature Review and Theoretical Background.....	6
The Emotional Basis of Moral Experience.....	6
Manipulating Moral Emotions.....	8
Constructing Emotional Experience.....	13
III. Overview of Studies.....	22
IV. Study 1: Measured Fear of Compassion.....	24
Methods.....	24
Results.....	26
Discussion.....	27
V. Study 2: Manipulated Fear of Compassion.....	29
Methods.....	29
Results.....	31
Discussion.....	34
VI. Study 3: Manipulated Cost of Compassion.....	36
Methods.....	37
Results.....	39
Discussion.....	44

VII.	Study 4: Implicit Measures of Compassion.....	47
	Methods.....	51
	Results.....	57
	Discussion.....	67
VIII.	General Discussion.....	70
	Evidence for Strategic Emotion Construction.....	70
	Advancing Constructionist Theories of Emotion.....	75
	Building a Constructionist Moral Psychology.....	76
	Future Directions.....	79
	Conclusion.....	81
	Appendices.....	82
	Figures.....	84
	References.....	103

List of Figures

Figure

1. Emotion intensity by emotion type and measured fear of compassion.....	84
2. Emotion intensity by emotion type and lay theory condition, Study 2.....	85
3. Emotion intensity by emotion type and lay theory condition, Study 2.....	86
4. Emotion intensity by emotion type and measured benefits of compassion, Study 2.....	87
5. Donation avoidance by lay theory condition, Study 2.....	88
6. Similarity to weak social groups by cost condition, Study 3.....	89
7. Emotion intensity by emotion type and cost condition, Study 3.....	90
8. Emotion intensity by emotion type and perceived helping cost manipulation check, Study 3.....	91
9. Emotion intensity by emotion type and measured fear of compassion, Study 3.....	92
10. Donation avoidance by cost condition, Study 3.....	93
11. Sample trial of the approach-avoidance manikin task, Study 4.....	94
12. Sample trial of the affect misattribution procedure, Study 4.....	95
13. Impulsive avoidance by image type and cost condition, Study 4.....	96
14. Impulsive avoidance of ambiguous images by cost condition and measured fear of compassion, Study 4.....	97
15. Proportion of AMP compassion responses by prime type and cost condition, Study 4.....	98
16. Proportion of AMP compassion responses by prime type and emotional granularity in the high cost condition, Study 4.....	99
17. Proportion of AMP compassion responses to ambiguous primes by cost condition and emotional granularity, Study 4.....	100

18. Emotion intensity by emotion type and cost condition, Study 4.....	101
19. Emotion intensity by emotion type and measured fear of compassion, Study 4.....	102

Chapter 1

Introduction

As if every passion didn't contain its quantum of reason.

-Friedrich Nietzsche

It's a wonderful thing to be able to create your own world whenever you want to.

-Woody Allen

Moral life is costly. Imagine that you are walking past a shallow pond on your way to give a keynote address, when you glance over and notice a child struggling to stay above water. If you jump in to save the child, you will ruin your clothes and your ability to fulfill your professional obligations. In this scenario—famously sketched out by the philosopher Peter Singer (1972)—people usually feel no hesitation about jumping in to save the child. Singer's intent was to demonstrate that there was no meaningful difference between this scenario and the more common scenario where we choose whether or not to donate money to help starving children around the world. There are numerous situations like this in everyday life that pit self-interest against acting morally. According to many theorists, moral emotions evolved to resolve these conflicts rapidly and decisively (Cosmides & Tooby, 2000; DeSteno, 2009; Frank, 1988, 2003; Haidt, 2003; Keltner, Haidt, & Shiota, 2006; Prinz & Nichols, 2010; Trivers, 1971). When deciding whether or not to save the child, people might feel a surge of sympathy for the child's plight or pangs

of anticipatory guilt for not helping, and these emotions should, on average, silence any self-interested desires to avoid helping (Frank, 1988).

Yet this view of moral emotions as “commitment devices” (Frank, 1988, 2003) assumes that emotions come unbidden and unfiltered by selfish motives. Cast in terms of dual-process models of social cognition, this view implies that people have an automatic emotional response that they can then attempt to suppress using more deliberative processing (Gross & Barrett, 2011). Because emotion regulation is often unsuccessful, moral emotions will usually serve as effective commitment devices that ensure moral behavior (Frank, 1988). The emotions-as-commitment-devices view draws upon basic emotions models that posit “affect programs” shielded from top-down motivational influences (Cosmides & Tooby, 2000; Ekman, 1992; Ekman & Cordaro, 2011; Izard, 1977, 2007; Panksepp, 2007). As put by Cosmides and Tooby (2000):

Emotion programs guide the individual into the appropriate interactive strategy for the game being played... this may translate into emotion programs in which the desire to attempt certain actions should be overwhelming, to the point where the actions are perceived as compulsory. In the grip of such programs, competing programs, including the normal integration of prudential concerns and social consequences, are muted or terminated. (p. 107)

According to this perspective, motivations to avoid acting morally influence the decision to engage in controlled emotion regulation, but do not contaminate the initial moral emotions themselves. Because moral emotions have a “head start” in determining the behavioral response, they will more often win out against self-interest once activated.

More recent models of emotion suggest that such assumptions about the inevitability of moral emotional activation and influence should be questioned. Appraisal theories (Lazarus, 1991; Moors, Ellsworth, Fridja, & Scherer, 2013) and constructionist theories (Barrett, 2006, 2012; Lindquist, in press; Russell, 2003; Schachter & Singer, 1962) allow for substantial flexibility in emotional responses to the same environmental conditions. In particular, both posit that motivation plays a pivotal role in determining which cognitive content is used to shape affective experience into discrete emotions. Appraisal theories posit that basic appraisals of personal relevance and goal congruence determine emotion construction (Lazarus, 1991; Ellsworth, 2013; Scherer, 2009), whereas constructionist accounts posit that motivation can influence how people wield domain-general emotion conceptual knowledge to construct discrete emotions from core affect (Barrett, 2006; Cunningham & Kirkland, 2012; Lindquist, in press; Russell, 2003).

These perspectives point to emotions as dynamic processes rather than static experiences (Barrett, 2006, 2012; Ellsworth, 2013). A clean separation between emotion generation and emotion regulation breaks down, because the same mechanisms—appraisal or categorization processes—unfold recursively over time (Barrett, 2006; Gross & Barrett, 2011; Scherer, 2009). Motivation to avoid moral emotions and their costly consequences could feed into this process by determining which appraisals or conceptual knowledge are utilized to make sense of affective experience (Barrett, 2006; Lazarus, 1991). People resolve ambiguous percepts in different ways depending upon which option they are motivated to see (Balcetis & Dunning, 2006; Bruner, 1957). People also will avoid or reappraise triggers of moral emotions if they perceive the behavioral consequences of those emotions to be costly (Cameron & Payne, 2011; Shaw, Batson, &

Todd, 1994). If people anticipate costly helping, they might construe ambiguous affect as disgust; but if they expect that helping will not be costly, they might construe affect as compassion. Such top-down motivational influences should be especially prominent when affect is ambiguous and can be resolved into different discrete emotions (i.e., when presented with a suffering victim who elicits an ambiguous high-arousal state that could be classified as compassion or disgust).

Strategic emotion construction is important practically because it suggests that people may have more flexibility to escape moral emotions than was previously suspected. Conversely, it suggests novel ways to foster moral emotions. In motivating moral action, it may be critical to clear away situational ambiguities that would allow people to construe their affective experiences in less moral ways. For instance, in trying to encourage charity donations, it may be preferable to use images that are less ambiguous elicitors of compassion rather than images that trigger ambiguous arousal that could be conceptualized as compassion or disgust (i.e., charity images that depict children with facial disfigurements), because the former will allow less interpretive discretion for avoiding compassion. If we can structure informational environments to minimize ambiguity in emotion interpretation, then we may be able to “nudge” people toward more pro-social emotions, and in turn, more pro-social behaviors.

Strategic emotion construction is important theoretically because it suggests an important revision to traditional moral emotions models. According to these models, moral emotions usually override selfish impulses and lead to moral behavior (DeSteno, 2009; Frank, 1988; Haidt, 2003; Keltner, Haidt, & Shiota, 2006). Although this view does not claim that people *always* heed their moral emotions, it has to claim that moral

emotions compel moral behavior much of the time—otherwise, they would not be effective commitment devices. This claim for the silencing power of moral emotions rests on the assumption that people have little ability to regulate moral emotions. This claim has been weakened by studies showing that people can successfully reappraise emotions after they have been activated (Gross, 1998; Koole, 2008). Strategic emotion construction goes further by suggesting that motivation can determine whether a moral emotion is generated in the first place (Barrett, 2006; Lazarus, 1991): motivation can intervene between the environment and the emotional response by changing how people appraise or construct their reactions (Ellsworth, 2013; Kuppens, 2013; Lazarus, 1991). In other words, moral emotions are transactions between people—including whatever motivations, needs, and values they may have—and their environments (Lazarus, 1991; Moors et al., 2013). Even if moral emotions have a relative advantage over self-interest once they have been activated (Frank, 1988), they are constructed through a person-situation relationship that may prove quite variable and amenable to self-interested influence (Lazarus, 1991; Moors et al., 2013). This dissertation presents four studies designed to test this possibility.

Chapter 2

Literature Review and Theoretical Background

The Emotional Basis of Moral Experience

Within psychology, an emerging consensus reveals that moral judgment and moral behavior have a strong emotional basis (Prinz, 2007). The social intuitionist model suggests that automatic emotional reactions—and not deliberative reasoning—are the primary cause of moral judgments (Haidt, 2001). In support of this perspective, studies have shown that manipulating emotions and affect can influence their moral judgments. Making people disgusted through noxious environmental stimuli such as odors or dirty desks increases the severity of moral wrongness judgments (Schnall, Clore, Haidt, & Jordan, 2008). Hypnotically inducing disgust toward specific words increases moral wrongness judgments about scenarios using those words (Wheatley & Haidt, 2005). Disgust- and anger-inducing film clips increase judgments of moral wrongness (Horberg, Oveis, Keltner, & Cohen, 2009; Lerner, Goldberg, & Tetlock, 1998) and amusing film clips decrease such judgments (Valdesolo & DeSteno, 2006). Brain areas associated with emotion—such as the amygdala, anterior insula, and ventromedial prefrontal cortex—are activated when people make moral judgments (Greene, Somerville, Nystrom, Darley, & Cohen, 2001; Moll, de Oliveira-Souza, Bramati, & Grafman, 2002; Sanfey et al., 2003), and populations with damage to these areas exhibit abnormal moral judgment (Blair, 1995; Damasio, 1994; Gray, Jenkins, Heberlein, & Wegner, 2011; Koenigs et al., 2007).

Emotions are also among the most effective predictors of whether people engage in pro-social or anti-social behavior toward others (Haidt & Kesebir, 2010). Emotions such as compassion (Batson, 2011a; Goetz, Keltner, & Simon-Thomas, 2010), gratitude (Algoe, 2012; DeSteno, Bartlett, Baumann, Williams, & Dickens, 2010), and elevation (Schnall, Roper, & Fessler, 2010) sustain cooperative and altruistic behavior, whereas emotions such as disgust lead to moral exclusion and dehumanization (Harris & Fiske, 2006; Jones & Fitness, 2008; Sherman & Haidt, 2011). Especially anti-social populations—such as criminal psychopaths (Blair, 1995; Kiehl, 2006) and acquired sociopaths (Damasio, 1994)—lack the affective reactivity that would otherwise inhibit immoral behavior (Decety, Michalska, & Kinzler, 2011; Kiehl, 2006).

More recent research has examined the influence of specific emotions on specific kinds of moral judgments and moral actions (Horberg, Oveis, & Keltner, 2011). According to the appraisal tendency framework, discrete emotions are associated with specific appraisals/constructions about the world and one's relation to it (Lazarus, 1991; Lerner & Keltner, 2000). Specific moral emotions should therefore be associated with distinct moral concerns (Horberg et al., 2011). One prominent framework classifies anger as a response to harm and autonomy violations, contempt as a response to authority and community violations, and disgust as a response to purity and divinity violations (Rozin, Lowery, Imada, & Haidt, 1999; although see Richardson & Gross, 2011 for a different taxonomy). Similarly, the altruism literature has distinguished compassion—an other-oriented response that is congruent with the welfare of a person in need—from distress, a self-focused negative response that leads people to escape helping situations (Batson, 2011a). Whereas activating compassion leads people to act pro-socially, activating

distress or other emotions such as disgust or anger leads people to disengage from helping (Batson, 2011a; Pryor, Reeder, Yeadon, & Hesson-McInnis, 2004; Weiner, 1980). Although many theorists make claims about the influence of specific discrete emotions (such as disgust; Horberg et al., 2009), many of these effects may simply reflect the activation of positive or negative affect (Cameron, Lindquist, Gray, & Schein, 2013).

Past studies have manipulated emotions directly in order to alter moral experience. Yet no research has examined whether people might spontaneously construct their emotions to revise their moral landscapes. If people are motivated to avoid the behavioral consequences of a specific moral emotion, they might strategically construct a different emotion to avoid these costs.

Manipulating Moral Emotions

There are many ways to eliminate the emotions that underpin moral experience. Numerous studies have revealed that people can use emotion regulation to remove moral emotions. For instance, people often proactively regulate compassion toward others. Shaw and colleagues (1994) investigated empathy avoidance, “the motive to forestall feeling for another in order to escape the motivational consequences of those feelings” (p. 879). Their studies showed that empathy avoidance depends on awareness of an opportunity to help and perceiving that opportunity as high in cost. They led participants to anticipate helping a homeless man at either high (5-6 hours of helping) or low (1 hour) personal cost. Participants were then given the opportunity to choose between hearing one of two appeals from the homeless man, which were described as either high or low in emotional impact. Those who expected that helping would entail high personal cost chose more often to hear the low-impact appeal.

Building on this finding, Cameron and Payne (2011) examined whether empathy avoidance might explain why people feel more compassion for one victim than many victims. Because the prospect of having to help multiple victims is judged as costlier than helping single victims, people might stem any compassion they might feel for multiple victims. In two studies, Cameron and Payne (2011) found that skilled emotion regulators and participants who had been instructed to regulate their emotions exhibited more compassion for single victims than for multiple victims. Unskilled emotion regulators and participants who had been told to experience emotions did not exhibit the collapse of compassion. Thus, when helping is foreseen as costly, people actively eliminate the compassion that would compel them to help.

Moreover, the results in the Cameron and Payne (2011) experiments are consistent with the constructionist approach to moral emotions proposed in the current dissertation. According to constructionist accounts, there is not a strict division between emotion generation and regulation because the same conceptualization mechanism is involved in both (Gross & Barrett, 2011). Also, many appraisal theories posit that secondary appraisals such as coping potential can feed back recursively and reshape the ongoing emotional process (Ellsworth, 2013; Lazarus, 1991; Scherer, 2009). In their experiments, Cameron and Payne (2011) measured emotions over time and found that people kept compassion toward multiple victims from ever emerging in the first place. These analyses suggest that people can erase experiences of compassion at an early stage through strategic emotion construction.

There are other cases in which people actively eliminate compassion toward others. The dehumanization literature suggests that people will inhibit compassion toward

others in order to justify harm. Reminding people of their in-group's past atrocities against an out-group leads them to attribute fewer secondary emotions to out-group members, resulting in reduced compassion for them (Cehajic, Brown, & Gonzalez, 2009). Emotion regulation can also perpetuate ongoing harms. For instance, torture is considered more justified when it is committed by one's own country (v. another country), and this effect is mediated by reduced compassion for victims of in-group torture (Tarrant, Branscombe, Warner, & Weston, 2012). Finally, dehumanization of extreme out-groups may reflect spontaneous emotion regulation to avoid empathic exhaustion (Harris & Fiske, 2009). Consistent with this account, among people who are highly empathic—and who may be at the most risk for empathic exhaustion—emotion regulation skill predicts increased dehumanization (Cameron, Harris, & Payne, 2013).

In addition to emotion regulation, a second way that moral emotions might be undermined is through affect misattribution. People typically experience guilt at the thought of committing moral violations (Bandura, 1999; Cohen, Wolf, Panter, & Insko, 2011) and compassion at the sight of suffering victims (Batson, 2011a). To the degree that arousal in such cases is attributed to an external cue or a different emotional reaction, moral behavior may be compromised. In one study, participants were led to believe that a pill that they had ingested would lead to either increased or decreased arousal (Dienstbier & Hunter, 1971). Participants completed a difficult test and were told that they would have to justify poor performance to a panel of experts. At the end of the experiment, participants were left alone with the test, during which time they could cheat by changing their answers. Attributing arousal to the environment, rather than guilt, removed inhibitions about cheating. In a similar study, participants ingested a placebo pill with the

anticipation of either relaxing or arousing side effects, and were then induced to feel high or low levels of compassion (Coke, Batson, & McDavis, 1978). Participants provided the most aid in the high-compassion/relaxing-side-effects condition, suggesting that misattributing arousal to an external cue can undermine helping behavior.

In addition to misattributing arousal to incidental environmental cues, people might also attribute arousal to another emotion entailing different consequences. In one study, second-graders were allowed to commit a minor moral transgression in private, and then led to believe that resulting arousal was either shame or guilt (Dienstbier, Hillman, Lehnhoff, Hillman, & Valkenaar, 1975). Those who believed that arousal was shame at getting caught—and not guilt at committing the transgression itself—were more likely to transgress again when given another opportunity. Constructing arousal as guilt, by contrast, inhibited future transgressions.

Similarly, Batson and colleagues (1981, Experiment 2) utilized an emotion-specific misattribution paradigm to shape emotions toward a victim. Participants were told that they would see another participant receive shocks in a memory task, and ingested a placebo pill beforehand. Some participants were told that the pill would cause compassion-like side effects (warmth), whereas others were told that it would cause distressing side effects (discomfort). To the degree that people experience both compassion and distress in response to others' suffering, misattributing one of these reactions to an external cue should leave the other emotion active to influence helping decisions. When participants could misattribute compassion to the pill, they attributed their remaining arousal to distress and escaped the helping situation.

The findings by Dienstbier, Batson, and others suggest that moral emotions can be constructed out of affective responses and situationally salient emotion concepts. By changing the emotion concepts afforded in a given situation, we can change the moral emotions that people feel. These results foreshadow constructionist accounts of emotion that will be considered below, and suggest the intriguing possibility that people might spontaneously construct different emotions depending on which conceptual affordances in a situation they are motivated to attend to. In sum, the misattribution findings suggest that making sense out of affective experience is an important facet of moral emotions that has downstream effects on moral behavior.

Thus far I have discussed two ways that people can erase the emotions that underpin moral judgment and moral behavior. First, people can actively regulate their moral emotions. Second, people can misattribute their arousal in moral situations to external cues or other emotions. But is there a third process that combines the active nature of emotion regulation with the sense-making function implied by the misattribution findings? I will argue that people actively construct emotions that fit with pre-existing motivations. If people are motivated to avoid costly moral behavior, they might make sense of what they are feeling in a way that does not compel such costs. If multiple emotion concepts are afforded in a given situation, people may conceptualize their affect in a way that enables compassion avoidance. Importantly, this is distinct from reappraisal, an emotion regulation technique in which people consciously alter appraisals to change emotions (Gross, 1998). Rather, I am suggesting that people pre-consciously and strategically categorize affect as a different discrete emotion if the cost of moral

behavior is high. To understand how such strategic emotion construction may be possible, I turn next to constructionist models of perception and emotion.

Constructing Emotional Experience

The idea that people construct experience to match their pre-existing motivations is not new. Beginning in the 1940's, the New Look movement claimed that perception is not simply a bottom-up read-out of the objective world; rather, perception is constructive, influenced by top-down factors such as needs, desires, and values (Bruner, 1957).

Although initial excitement over the New Look gave way to methodological controversies that dampened enthusiasm for the movement (Erdelyi, 1974), an increasing number of studies reveal that motivations can exert top-down influence on perceptual processes without conscious awareness of the perceiver.

One way to demonstrate such effects is by showing that motivations determine the contents of conscious awareness in the first place. In one set of studies, participants were told that they would be assigned to either a pleasant or an unpleasant task based upon which of two possible interpretations of an ambiguous figure that they saw (i.e., a "B" or a "13"; Balcetis & Dunning, 2006). Participants tended to see the interpretation of the ambiguous stimulus that would assign them to the pleasant task. Care was taken to rule out lying and deception as alternative explanations. When there was no ambiguity in the figure that would afford a biased interpretation, the effects disappeared. When people were told after seeing the ambiguous stimulus that the assignment scheme was reversed (i.e., the interpretation that would have led to the better assignment would now lead to the worse assignment) they reported the interpretation that would have originally led to the better outcome, suggesting a basic perceptual bias. Motivated perception effects were

also found using eye tracking and reaction time measures, suggesting that the effects were not due to response bias. These findings suggest that motivated perceptual biases happen pre-consciously, selecting the preferred stimulus interpretation for conscious awareness while inhibiting the alternative (Balcetis & Dunning, 2006).

To further rule out response bias as an alternative explanation, more recent studies have used binocular rivalry paradigms to establish how motivations can filter what enters conscious awareness. In one set of studies using a binocular rivalry paradigm, people were more likely to report consciously perceiving images that were associated with financial rewards than rival images associated with financial costs, even under conditions when accuracy had been incentivized (Balcetis, Dunning, & Granot, 2012). In a similar vein, another study found that neutral human faces that had been paired with negative moral information were more likely to gain conscious awareness in a binocular rivalry paradigm compared to other faces (Anderson, Siegel, Bliss-Moreau, & Barrett, 2011).

People also tend to perceive ambiguous aspects of the physical environment in ways that conserve resources (Proffitt, 2006). People who are fatigued or in poor health perceive hills to have steeper gradients, possibly to prevent unwise energy expenditures (Proffitt, 2006). Costs and benefits of action are perceived in the very contours of the environment itself (Proffitt, 2006; see also Gibson, 1979). Contours of our affective environments may be similarly sensitive. According to one recent review (Goetz et al., 2010), a key appraisal underlying compassion is coping potential: if people believe that they lack the resources to deal with a suffering victim—and would risk being exploited or exhausted—they may be unlikely to construct compassion. If the motivation to conserve resources can bias physical perceptions, then it might influence whether affect is

perceived as compassion rather than other discrete emotions such as distress or disgust. Such motivated construals should only emerge when the situation affords ambiguity for multiple interpretations of affective experience (i.e., Balci et al., 2006). If people believe that moral behavior would require extensive resources, they might construe affect as a different emotion while inhibiting compassion as an alternative interpretation.

Given that motivations can influence basic perceptual processes, it might seem intuitive to predict that motivations exert top-down influence on emotional experience. Yet the preceding claim about strategic compassion construction does not fit neatly with traditional models of emotion—such as basic emotions theories—which assume that motivations impact regulatory processes but do not contaminate the emotional response itself. Constructionist models of emotion can better incorporate top-down motivational influences on emotional experience.

According to many traditional models, emotions are innate “affect programs” that are triggered by appraisals of external events, and which coordinate a host of responses including neural and physiological activation, subjective experience, and behavioral tendencies (Cosmides & Tooby, 2000; Ekman, 1992; Ekman & Cordaro, 2011; Izard, 1977, 2007; Panksepp, 2007). Yet although these models long dominated emotions research and support common-sense experience of discrete emotions, their underlying assumptions have been called into question. Evidence for reliable neurological, physiological, judgmental and behavioral signals of discrete emotions is equivocal, and there is often little coordination between different response channels (i.e., neurology, physiology, experience, and behavior) for a given discrete emotion (Barrett, 2006; Barrett, Mesquita, Oschner, & Gross, 2007; Lindquist, Siegel, Quigley, & Barrett, 2013;

Lindquist, Wager, Kober, Bliss-Moreau, & Barrett, 2012; Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005).

By contrast, constructionist models account for the variability of emotion experience by suggesting that discrete emotions are emergent products of more basic psychological processes (e.g., Kirkland & Cunningham, in press; Lindquist, in press). One of the earliest constructionist models was Schachter and Singer's (1962) two-factor theory, which posited that discrete emotions result from the combination of physiological arousal and attributions about the causes of emotion experience. Their experiments revealed that manipulating situational cues could shift the attributions that people made about their arousal to create different emotional experiences. The same affective arousal can be interpreted as joy, anger, or a medication side effect depending on the features of the situation that are made salient (Schachter & Singer, 1962).

Building from this model, Russell (2003) posited that sub-components of emotional experience include core affect and attribution. Core affect is an organism's consciously experienced neurophysiological state in relation to its environment, comprised of two dimensions of valence (pleasant/unpleasant) and arousal (alert/bored; Barrett, 2006; Russell, 2003). Core affect can exist without being labeled or categorized, and is not attached to any causal objects. Like the light spectrum, which can be categorized into discrete colors, core affect can be categorized as different discrete emotions (Barrett, 2006, 2012). According to Russell (2003), people use attributions to construct discrete emotions out of core affect, attaching core affect to causal objects in the environment. Whereas Schachter and Singer (1962) argued that arousal was the only state that preceded discrete emotions—meaning that valence is constructed through

conscious attribution—modern constructionists posit that both valence and arousal (which comprise core affect) precede discrete emotion construction (cf. Moors, 2009).

Barrett's (2006) conceptual act model extends this approach by shifting focus from conscious attributional processes to pre-conscious emotion categorization using situated emotion concepts. According to the conceptual act model, people categorize core affect as a discrete emotion using conceptual knowledge about emotions (Barrett, 2006, 2012). This categorization process happens automatically and pre-consciously (Wilson-Mendenhall, Barrett, Simmons, & Barsalou, 2011). Rather than using conscious attributions to make sense of core affect, people experience a discrete emotion without awareness of categorization taking place (Barrett, 2006). Once conceptual knowledge is activated, the pattern for the discrete emotion completes rapidly (~200 milliseconds), filling in further information to draw inferences for emotion-based action (cf. Wilson-Mendenhall et al., 2011). This top-down contribution of emotion concepts to emotion experience is thought to be self-reinforcing, as the emotion concept should become more fluent with repeated activation as the completed pattern is elaborated over time (cf. Wilson-Mendenhall et al., 2011; see also Cunningham, Zelazo, Packer, & van Bavel, 2007). In Gestalt terms, constructionist theories posit that a discrete emotional "figure" simply pops out against the "ground" of core affect (Barrett, 2006, 2012).

Early evidence for the conceptual act model revealed that core affect and accessible conceptual knowledge jointly shape construction of discrete emotions (Lindquist & Barrett, 2008a). Lindquist and Barrett (2008a) primed participants with conceptual knowledge about fear, conceptual knowledge about anger, or non-emotional conceptual knowledge. Participants then listened to music designed to elicit either

negative or neutral affect. Finally, participants indicated their likelihood of engaging in a variety of risky behaviors, as a world-focused index of fear. Results supported the conceptual act model: participants who were experiencing negative affect and primed with fear were the least likely to endorse risky behaviors. Those who had been primed with fear alone (without negative affect) or negative affect alone (without fear priming) did not show reduced endorsement of risky behaviors, suggesting that conceptual knowledge about fear and core affect were both necessary for the discrete fear response.

The conceptual act model also posits that emotion concepts are not unitary, but are instead drawn from a set of situated conceptualizations (Wilson-Mendenhall et al., 2011). On a situated perspective, concepts are processed against a background situation involving events, actions, and embodied states (Barsalou, 2009). People have concepts for anger at work, on the road, or at home, and each situated conceptualization of anger might be used to categorize core affect in a way tailored to the context in question.

From a situated emotions perspective, constructing emotional experience is about predicting what to do next, rather than representing states of the world (Barsalou, 2009; Smith & Semin, 2004; Wilson-Mendenhall et al., 2011; Varela, Thompson, & Rosch, 1991). If a situation affords different possibilities for constructing emotion, then people may pre-consciously conceptualize core affect to best fit their current motivations, goals, and possibilities for action within that situation (Barrett, 2006; Loersch & Payne, 2011). When moral behavior is costly, people may want to avoid both the behavior and the emotions that would lead to it (Cameron & Payne, 2011; Shaw et al., 1994). People who are motivated to avoid this chain of events may construct an emotional reality that facilitates compassion avoidance by constructing core affect as disgust rather than

compassion. Thus, motivation would influence which set of situated conceptual knowledge is used to categorize core affect. This strategy should be most effective under ambiguous conditions where there are many possibilities for conceptualizing core affect (Balci et al., 2006). When there is less ambiguity, people will be more constrained by salient conceptual knowledge even if this conflicts with their goals.

On this account, moral emotions such as compassion are enactive (Halifax, 2012; Solomon, 1976; Varela, Thompson, & Rosch, 1991). People actively and pre-consciously construct a specific emotion from core affect to fit their motivations for moral action. This constructive process is iterative, as top-down reinforcement of the discrete emotion that has been conceptualized will change perceptual construals and action tendencies (Barsalou, 2009; Cunningham et al., 2007). If people do not want to feel compassion, then when put into an affective state that could be conceptualized or appraised as either compassion or disgust they may choose the latter. This selection would in turn preclude the undesired behavioral tendency that would follow from compassion. Moral emotions thus become a form of social negotiation and engagement (Barrett, 2012; Boiger & Mesquita, 2012). On the one hand, socially constituted emotion concepts make sense of core affect in ongoing interactions. On the other hand, people can use emotion concepts strategically to change the social and moral reality for themselves and others.

Strategic emotion construction is related to but distinct from emotion differentiation, the ability to distinguish core affect into discrete emotional states. People with highly differentiated emotion concepts are better at coping (Tugade & Fredrickson, 2004), regulating their emotions (Barrett, Conner, Benvenuto, & Gross, 2001; Hill & Updegraff, 2012), and guarding against emotion priming of judgments (Cameron, Payne,

& Doris, in press). These findings speak to conceptual skill, but not whether motivation incentivizes people to construct emotions in different ways. Conceptual versatility may be orthogonal to motivations to feel specific emotions, and might in fact facilitate strategic emotion construction. The content and precision of conceptual knowledge can be distinguished from how it is used in practice (Lindquist & Barrett, 2008b).

Although this dissertation approaches strategic emotion construction from the perspective of constructionist theories, the predictions are also consistent with appraisal theories. Appraisal theories give motivation a pivotal role in emotion generation (Lazarus, 1991; Moors et al., 2013), and allow for significant, even “infinite” (Scherer, 2009) flexibility in the emotions that can be generated from appraisals about the same stimuli (Ellsworth, 2013; Lazarus, 1991; Moors, 2010; Scherer, 2009). These appraisals include judgments of personal relevance and goal congruence, as well as ability to cope with the encounter (which is important for compassion; Goetz et al., 2010; Lazarus, 1991). When appraisals change—which can arise from contextual or trait differences in motivation—the subsequent emotions will change (Ellsworth, 2013). Much like constructionist accounts, appraisal theories posit that emotion generation can happen rapidly and non-consciously (Lazarus, 1991; Moors, 2009; Scherer, 2009). Constructionist and appraisal theories can sometimes be difficult to distinguish, especially for those appraisal theories that posit that appraisals are not distinct causes of emotion but rather constitute and describe emotional experience (cf. Lindquist, in press; see Lazarus, 1991).

These approaches can be distinguished by their claims about the cognitive content that categorizes affect into discrete emotion. Whereas appraisal models posit specific appraisal dimensions that underpin emotion experience, constructionist models appeal to

domain-general conceptual knowledge and do not necessarily posit an intrinsic, subject-invariant relationship between appraisal combinations and specific emotions (Moors, 2009). Although appraisal theories allow that appraisals can be quite flexible across individuals and contexts, the appraisal once formed is thought to have a less variable relationship with subsequent emotional responses (Ellsworth, 2013; Moors et al., 2013). Constructionist theorists have argued that domain-general emotion conceptual knowledge accounts for emotional experience more parsimoniously than specific appraisal dimensions (Lindquist, in press). Appraisal theorists have countered that appraisal dimensions provide a specificity lacking in constructionist models (Ellsworth, 2013).

The current dissertation does not attempt to adjudicate between these views. Both approaches allow that motivation can guide people to strategically and pre-consciously interpret core affect in self-serving ways. I approach these studies from a constructionist lens because these theories offer a clearer connection to past research on motivated perceptual construal (Balcetis & Dunning, 2006). In this dissertation, I will test whether people can erase moral sentiments by strategically constructing emotions to avoid unwanted costs.

Chapter 3

Overview of Studies

According to constructionist models of emotion, people can flexibly construct discrete emotions from core affect. This flexibility should allow people to construct emotions to fit their motivations. I conducted four studies to test whether financial costs motivate people to construct their affective experience as disgust instead of compassion.

In the current dissertation, I examined strategic emotion construction using multiple dependent measures. In all four studies, I had people self-report how much compassion and disgust that they felt in response to affectively ambiguous social stimuli: homeless individuals. In all of these studies, I found that trait fear of compassion was associated with increased disgust, and in some cases, decreased compassion. In Studies 2 through 4, I manipulated cost of helping. In Study 2, I manipulated lay theories of compassion so that people believed that compassion would either be harmful or beneficial. Imposing a negative lay theory of compassion did not change self-reported emotions, but did lead people to avoid the opportunity for compassionate donation behavior. In Studies 3 and 4, I manipulated cost of helping by having people imagine engaging in high cost, low cost, or no donation toward ambiguous homeless individuals. In Study 3, I measured compassion using self-reports and ratings of self-other similarity to weak social groups, the latter of which has been used as an indirect compassion measure in prior research (Oveis, Horberg, & Keltner, 2010). The donation cost

manipulation did not influence these outcomes. It could be that reporting less compassion on these measures is socially undesirable. To address concerns about response bias, Study 4 used two implicit measures: an approach-avoidance task and the affect misattribution procedure. Manipulating donation cost was linked to decreased compassion on these implicit measures, depending on motivation (fear of compassion) and ability (emotional granularity) to engage in strategic emotion construction. Study 4 also revealed that strategic emotion construction only emerged in response to ambiguous images of homeless individuals, and not toward more prototypical compassion or disgust images that may have afforded less conceptual flexibility (e.g., Balci et al., 2006).

Chapter 4

Study 1: Measured Fear of Compassion

In this first study, I examined whether individual differences in the motivation to avoid compassion would predict changes in emotional responses to ambiguous social stimuli. Specifically, I focused on fear of compassion: the concern that if you feel compassion, you might become emotionally exhausted or be taken advantage of by others. People who are chronically afraid of the emotional or financial costs of compassion should be more motivated to avoid feeling compassion. For these individuals, feeling compassion is incongruent with their goals. These individuals should be more likely to conceptualize core affect as disgust rather than compassion, whereas people who are less motivated in this way should construct compassion rather than disgust.

Method

Participants

I recruited 66 participants from Amazon.com Mechanical Turk (MTurk). Participants were paid \$0.25 for completing the survey. Participant IP addresses and worker ID numbers were screened to ensure that they had not taken part in the earlier MTurk pilot sample (mentioned below). Demographic data were not collected during the survey. No participants were excluded from this study.

Materials and Procedures

Image task. After completing the online consent form, participants were directed to the image task. They were told the following: “Welcome to the experiment. The purpose of this experiment is to examine emotions and decisions. We are working with a charity organization—the Human Alliance—that helps at-risk individuals achieve economic and personal stability. We are working with the Human Alliance to test out images for use in their advertisements. You will see a series of images. These images depict the typical kinds of people that this organization helps.” Participants then saw a series of four images of homeless individuals. These four images were drawn from a larger pilot study of 114 images on MTurk. In the pilot study, 93 participants rated compassion and disgust toward each of a random subset of half (57) of the images. I computed a difference score (Compassion – Disgust) for each image. I selected the four images with the smallest difference scores (none of which showed significant differences in emotion ratings, p 's > .05) for use as ambiguous stimuli in the dissertation studies. All four images depicted homeless individuals (see Appendix I). In the pilot study, I also included the Fear of Compassion scale described below. Fear of compassion moderated the difference between compassion and disgust, $F(1, 87) = 19.89, p < .001, \eta^2 = .19$, such that fear of compassion was associated with more disgust, $r(89) = .32, p = .002$, and less compassion, $r(90) = -.25, p = .02$. This intriguing finding is what led me to conduct Studies 1 and 2 in order to replicate and extend this exploratory effect.

Explicit emotion ratings. Participants rated how much disgust, compassion, and distress they felt (from 1=I do not feel a lot of... to 5=I feel a lot of...) toward each of the four images. The four images were presented in random order and the three emotion terms were always presented in the order listed above.

Individual differences. Participants then completed the 10-item Fear of Compassion for Others sub-scale of the Fear of Compassion scale (Gilbert et al., 2010). This scale measures the perception that compassion for others will be psychologically exhausting and leave one open to exploitation (e.g., “I worry that if I am compassionate, people will be drawn to me and drain my emotional resources”, “Being too compassionate makes people soft and easy to take advantage of”, “There are some people in life who don’t deserve compassion”). Scale items were presented randomly and participants responded from 0=Don’t agree at all to 4=Completely agree. Although this scale is relatively new, it has been validated as an outcome (i.e., decreased fear of compassion) of long-term compassion cultivation training (Jazaieri et al., 2012).

Participants also completed the 22-item Empathy Quotient Short-Form (Wakabayashi et al., 2006). This scale measures the tendency to empathize with and feel compassion for others (e.g., “I really enjoy caring for other people”, “I find it easy to put myself in somebody else’s shoes”, “I tend to get emotionally involved with a friend’s problems”). Scale items were presented randomly and scaled from -2=Strongly disagree to 2=Strongly agree. This scale has been used to document deficits in autistic and psychopathic populations (Baron-Cohen, 2012).

Results

Correlational analyses revealed that compassion and disgust were negatively correlated, $r(66) = -.27, p = .03$, disgust and distress were positively correlated, $r(66) = .44, p < .001$, and compassion and distress were uncorrelated, $r(66) = .13, p = .29$. Results were analyzed using a repeated measures analysis of variance (ANOVA) with emotion type as the within-subjects factor (compassion; disgust; distress), as well as the interactions with fear of compassion ($\alpha = .91$) and trait empathy ($\alpha = .85$). There were not

main effects of emotion type, $F(2, 126) = .33, p = .72, \eta^2 = .01$, trait empathy, $F(1, 63) = .08, p = .78, \eta^2 = .00$, or fear of compassion, $F(1, 63) = .04, p = .85, \eta^2 = .00$, and there was not an emotion type by trait empathy interaction, $F(2, 126) = .31, p = .71, \eta^2 = .01$.

Most critically for the present hypothesis, fear of compassion moderated the effect of emotion type on intensity, $F(2, 126) = 11.60, p < .001, \eta^2 = .16$. Figure 1 displays marginal means of compassion, disgust, and distress at high and low fear of compassion. Participants who were high (+1 *SD*) in fear of compassion reported less compassion ($M = 2.26$) than disgust ($M = 3.17$), $p = .003$, and less compassion than distress ($M = 2.87$), $p = .05$. By contrast, participants who were low (-1 *SD*) in fear of compassion reported more compassion ($M = 3.07$) than disgust ($M = 2.38$), $p = .03$, but no difference between compassion and distress ($M = 2.70$), $p = .19$.

I also conducted multivariate linear regressions predicting each emotion from mean-centered fear of compassion and trait empathy. Fear of compassion predicted reduced compassion, $\beta = -.40, p = .001$, but trait empathy did not, $\beta = .05, p = .67$. Fear of compassion predicted increased disgust, $\beta = .36, p = .003$, but trait empathy did not, $\beta = -.08, p = .49$. Finally, there were no relationships between distress and fear of compassion, $\beta = .08, p = .54$, or trait empathy, $\beta = -.01, p = .95$. Thus, chronic motivations to avoid feeling compassion were associated with increased disgust and reduced compassion, independent of trait empathy.

Discussion

Study 1 provides preliminary evidence that motivation to avoid compassion predicts different patterns of emotional response to ambiguous social targets. People who were afraid of the psychological and financial consequences of compassion were more

likely to experience disgust than compassion in response to homeless individuals, whereas people who were less afraid of compassion experienced more compassion than disgust. Importantly, this effect obtained independently of the trait propensity to empathize with and feel compassion for others, which suggests that this effect was motivational in nature, and not due to a low tendency to experience compassion among those high in fear of compassion. Although these findings are consistent with fear of compassion facilitating strategic emotion construction, this evidence is only correlational. To develop a stronger case for strategic emotion construction, I would need to show that manipulating costs causes similar effects on emotion and emotion-relevant behavior.

Chapter 5

Study 2: Manipulated Fear of Compassion

In Study 2, I examined the causal influence of motivation to avoid compassion on emotion and emotion-relevant behavior. I used a biased questionnaire technique (e.g., Job, Dweck, & Walton, 2010) to manipulate lay theories of compassion. In the fear of compassion condition, participants completed the fear of compassion scale at the beginning of the experiment. In the benefits of compassion condition, I modified each fear of compassion item to convey rewards of compassion. For instance, the item “People will take advantage of me if they see me as compassionate” became “People will be nicer to me if they see me as compassionate”. This contrast captures the difference in having a negative or positive lay theory of compassion accessible before encountering ambiguous homeless individuals. In the control condition, participants completed the fear of compassion scale after the emotion ratings as in Study 1. Comparing the fear of compassion and control conditions is equivalent to an anticipatory fear manipulation (e.g., Shepherd, Spears, & Manstead, 2013), by reminding people of reasons to fear compassion either before or after encountering ambiguous homeless individuals.

Method

Participants

I recruited 192 participants (75 males, 118 females; average age = 38.5 years) from Amazon.com MTurk. Participant IP addresses and worker ID numbers were

screened to ensure that they had not taken part in earlier MTurk experiments in this series. The Qualtrics server randomly assigned participants to the fear of compassion, benefits of compassion, or control conditions. Participants were paid \$0.50 for completing the survey. No participants were excluded from the current study.

Materials and Procedures

Lay theory manipulation. In the fear of compassion condition, participants completed the fear of compassion scale after completing the online consent form. In the benefits of compassion condition, participants completed the modified benefits of compassion scale after completing the consent form. The control condition proceeded directly to the image task, and completed the fear of compassion scale immediately prior to the donation avoidance measure later on.

Image task. The image task was identical to the prior study.

Explicit emotion ratings. Participants rated compassion and disgust as in Study 1.

Donation avoidance. Finally, participants were given the chance to engage in donation behavior. Participants read the following: “We would now like to give you the chance to donate actual money to help victims. If you click ‘YES’, then at the end of the experiment you will be re-directed to a website where you can make a monetary donation. If you click ‘NO’ you will not be re-directed to this website and you will move on to the next part of the experiment. We will not know whether or not you actually make a donation.” If participants clicked “YES”, then they were given a link to the Habitat for Humanity website; if they clicked “NO”, then they were not given this link. I predicted that participants in the fear of compassion condition would be less likely to access this

link than participants in the other two conditions. Participants then reported their gender, ethnicity, and age before being debriefed and dismissed.

Results

Explicit emotion ratings

Primary analysis. Compassion and disgust were negatively correlated, $r(193) = -.29, p < .001$, disgust and distress were positively correlated, $r(193) = .27, p < .001$, and compassion and distress were positively correlated, $r(193) = .31, p < .001$. First, I analyzed results using a repeated measures ANOVA with emotion type (compassion; disgust), lay theory condition, and the interaction between the two. There was not a main effect of emotion type, $F(2, 190) = 2.55, p = .11, \eta^2 = .01$, as compassion ($M = 3.04, SD = 1.08$) and disgust ($M = 2.84, SD = 1.10$) did not differ. There was also not a main effect of lay theory condition, $F(2, 190) = .11, p = .90, \eta^2 = .00$, or an emotion type by lay theory condition interaction, $F(2, 190) = .12, p = .89, \eta^2 = .00$. Figure 2 displays emotion intensity by emotion type and lay theory condition. Overall, the lay theory manipulation did not impact explicit emotion ratings toward homeless individuals.

Secondary analyses. Next, I restricted my analysis to the two conditions in which fear of compassion was measured: the fear of compassion and control conditions. The only difference between these two conditions was the timing of when fear of compassion was assessed. Does anticipating costs of compassion before (v. after) encountering homeless individuals lead to emotional changes, and does this differ as a function of measured fear of compassion? To examine this question, I ran a repeated measures ANOVA similar to the one above, also modeling the interaction with measured fear of compassion. Measured fear of compassion did not differ by time of measurement, $F(1,$

122) = .004, $p = .95$, $\eta^2 = .00$, and showed similar psychometric properties ($\alpha = .89$ in the fear of compassion condition, $\alpha = .90$ in the control condition). There was a marginal effect of emotion type, $F(1, 122) = 2.75$, $p = .10$, $\eta^2 = .02$, but not of lay theory condition, $F(1, 122) = .02$, $p = .90$, $\eta^2 = .00$, or measured fear of compassion, $F(1, 122) = 1.15$, $p = .29$, $\eta^2 = .02$. There was not an emotion type by lay theory condition interaction, $F(1, 122) = .00$, $p = .99$, $\eta^2 = .00$, or emotion type by lay theory condition by measured fear of compassion interaction, $F(1, 122) = .02$, $p = .90$, $\eta^2 = .00$. However, emotion type interacted with measured fear of compassion, $F(1, 122) = 8.29$, $p = .005$, $\eta^2 = .06$. Figure 3 displays emotion intensity at high and low fear of compassion. Participants who were high (+1 *SD*) in fear of compassion did not report different amounts of compassion ($M = 2.93$) and disgust ($M = 3.11$), $p = .39$. Participants who were low (-1 *SD*) in fear of compassion, however, reported more compassion ($M = 3.23$) than disgust ($M = 2.55$), $p = .002$. Fear of compassion predicted disgust, $\beta = .26$, $p = .003$, but not compassion, $\beta = -.14$, $p = .13$. Whereas timing of fear of compassion measurement did not influence emotion ratings, measured fear of compassion moderated emotion ratings as in Study 1.

I also examined whether endorsing a positive lay theory of compassion was associated with emotional changes: does believing that compassion leads to social benefits predict more compassion and less disgust? Such a finding would be the mirror image of the fear of compassion finding reviewed above. I conducted a repeated measures ANOVA in the benefits of compassion condition, modeling the interaction between emotion type and measured benefits of compassion. There was not a main effect of emotion type, $F(1, 65) = .27$, $p = .61$, $\eta^2 = .00$, but there was a main effect of benefits of compassion, $F(1, 65) = 4.16$, $p = .05$, $\eta^2 = .06$, and a marginal emotion type by

benefits of compassion interaction, $F(1, 65) = 3.51, p = .07, \eta^2 = .05$. Figure 4 displays emotion intensity at high and low levels benefits of compassion. Participants who were low ($-1 SD$) in perceived benefits of compassion did not show any differences between compassion ($M = 2.61$) and disgust ($M = 2.91$), $p = .34$. Participants who were high ($+1 SD$) in perceived benefits of compassion reported marginally greater compassion ($M = 3.33$) than disgust ($M = 2.79$), $p = .10$. Perceived benefits of compassion predicted compassion, $\beta = .35, p = .003$, but not disgust, $\beta = -.05, p = .69$.

These results suggest that the manipulation of motivation did not effectively influence explicit ratings of emotions. However, individual differences in motivations were associated with explicit emotion ratings, replicating the results of Study 1. Endorsing a negative lay theory of compassion—fearing that compassion will lead to exhaustion and exploitation—was associated with more disgust toward homeless individuals. Endorsing a positive lay theory about compassion—that compassion confers social benefits—was associated with more compassion.

Donation avoidance

Next, I examined a compassion-related behavior: selective exposure to a real donation opportunity. Although the manipulation of motivation did not influence explicit emotions, it is possible that the behavioral measure would be more sensitive to motivational effects. In the current sample, 175 participants chose not to gain access to a link to Habitat for Humanity, whereas 18 participants (9.3% of the sample) accessed this link. To predict whether lay theory condition influenced the decision to avoid this donation opportunity, I conducted a logistic regression predicting the binary donation avoidance variable from two dummy coded variables representing the contrasts between

the fear of compassion and benefits of compassion conditions, and between the fear of compassion and control conditions. The model correctly classified 90.7% of participants as either avoiding or exposing themselves to a donation opportunity. Figure 5 shows the proportion of participants who avoided or accessed the donation link in each condition. Although the fear v. benefits contrast was not significant, $B = -1.27$, $S.E. = .82$, $\text{Exp}(B) = .28$, $p = .12$, the fear v. control contrast was significant, $B = -1.63$, $S.E. = .80$, $\text{Exp}(B) = .20$, $p = .04$. Because the fear of compassion condition was the referent group for these contrasts, this result indicates that the odds of avoiding the donation opportunity were five times greater when people completed the fear of compassion scale early rather than late. Making salient the possibility that compassion could lead to exploitation thus made people five times more likely to avoid donation.

Collapsing across the fear of compassion and control conditions, measured fear of compassion trended toward predicting more donation avoidance, $B = .49$, $S.E. = .34$, $\text{Exp}(B) = 1.63$, $p = .13$. In the benefits of compassion condition, perceived benefits predicted reduced donation avoidance, $B = -1.13$, $S.E. = .51$, $\text{Exp}(B) = .32$, $p = .03$. A 1- SD increase in perceived benefits of compassion was associated with nearly a third of the odds (.32) of avoiding donation. Donation avoidance was also associated with compassion, $B = -.68$, $S.E. = .28$, $\text{Exp}(B) = .51$, $p = .02$, but not disgust, $B = .21$, $S.E. = .27$, $\text{Exp}(B) = 1.24$, $p = .43$. A 1- SD increase in self-reported compassion was associated with nearly half the odds (.51) of avoiding donation.

Discussion

The current study revealed mixed evidence for the causal role of fear of compassion in changing compassion and compassion-related behavior. Although the lay

theories manipulation did not cause changes in self-reported compassion and disgust, individual differences in lay theories of compassion within each condition were associated with predicted changes in these emotions. Participants who reported greater fear of compassion felt more disgust, and participants who endorsed more benefits of compassion felt more compassion. As in Study 1, motivations about compassion were associated with changes in explicit emotional responses.

The lay theory manipulation did influence a compassion-related behavior: avoiding an opportunity to donate money. Participants who completed the fear of compassion scale early were more likely to avoid the chance to donate, compared to those who completed it late. Even though the lay theory manipulation did not shift self-reported emotions, it did change pro-social behavior that was associated with self-reported compassion. One reason that the lay theory manipulation may have influenced behavior but not explicit emotion reports is that people engaged in response correction. For many people, it might be socially undesirable to report less compassion and more disgust for homeless individuals. I pursued this possibility in Study 4 using implicit measures that can get past response correction. Next, I considered whether a different manipulation of helping cost might cause changes in explicit emotions.

Chapter 6

Study 3: Manipulated Cost of Compassion

In Study 3, I utilized a different manipulation of helping cost to examine strategic emotion construction. Instead of manipulating lay theories of compassion, I had participants imagine engaging in high cost or low cost donation behavior, or did not suggest donation behavior, as they encountered ambiguous social stimuli for the first time. I then had participants complete explicit emotion ratings as in earlier studies, as well as an indirect measure of compassion.

For the indirect measure of compassion, I had participants rate how similar they felt to various social groups. Compassion is linked to increased similarity between self and others (Batson, 2011a; Loewenstein & Small, 2007): inducing compassion leads people to feel more similar to weak social groups (e.g., homeless individuals; Oveis et al., 2010), and inducing similarity increases compassion (Valdesolo & DeSteno, 2011). Constructing affect as compassion rather than disgust should lead to increased similarity to weak social groups (Oveis et al., 2010). Constructing affect as disgust rather than disgust should lead to decreased similarity, given that disgust is a distancing emotion (Pryor et al., 2004; Sherman & Haidt, 2011).

I predicted that cost of helping would influence responses on the direct and indirect compassion measures. Participants who have been cued with the idea of high cost helping should be motivated to construct their affective experience as disgust rather than

compassion. They should show reduced similarity to weak social groups, reduced explicit compassion, and increased explicit disgust compared to participants who have been cued with the idea of low cost helping and participants who have not been cued with helping.

Method

Participants

I recruited 203 participants (100 males, 97 females, 6 unreported; average age = 32.8 years) from Amazon.com MTurk. Participant IP addresses and worker ID numbers were screened to ensure that they had not taken part in earlier MTurk experiments in this series. The Qualtrics server randomly assigned participants to the high cost, low cost, or no-request control conditions. Participants were paid \$0.50 for completing the survey. No participants were excluded from the current study.

Materials and Procedures

Image task. After participants completed the online informed consent form, they saw the following instructions:

“Welcome to the experiment. The purpose of this experiment is to examine emotions and decisions. We are working with a charity organization—the Human Alliance—that helps at-risk individuals achieve economic and personal stability. We are working with the Human Alliance to test out images for use in their advertisements. You will see a series of images. These images depict the typical kinds of people that this organization helps. When you see each image, we would like you to think about how much money you would be willing to donate to the person depicted in the image. Each image will remain on screen until you make a firm decision in your mind about how much money you would be willing to

donate. Once you have made your decision, press the continue button to proceed to the next image.”

In the high cost condition, participants were told: “This donation amount should be anywhere between a minimum of \$25 and a maximum of \$100.” In the low cost condition, participants were told: “This donation amount should be anywhere between a minimum of \$0.25 and a maximum of \$1.00.” Participants in the control condition did not receive the last three sentences of the instructions above.

Manipulation check. Participants were asked to rate how costly they expected helping to be: “How costly do you think it would be to help the at-risk individuals that you saw earlier?” from (1=Not at all costly to 5=Extremely costly).

Self-other similarity ratings. Participants then completed self-other similarity ratings to 26 social groups (Oveis et al., 2010). Participants were told: “We would like you to rate how similar or different you are to the following groups. Please go along fairly quickly and use the scale below.” Participants rated how similar they felt to each group (from 1=Very similar to 7=Very different). The groups included: young adults, elderly people, small children, Americans, males, females, college undergraduates, Republicans, Democrats, liberals, conservatives, business students, religious fundamentalists, politicians, professional athletes, celebrities, saints, convicted felons, farm animals, peace activists, members of sororities or fraternities, orphaned children, terrorists, corporate lawyers, homeless people, and procrastinators. The social groups were presented in randomized order through Qualtrics.

Explicit emotion ratings. Participants rated compassion, disgust, and distress as in Study 1.

Hypothetical donation. After completing the emotion measures, participants were told: “Think back to the beginning of the experiment, when you saw those images of people that the Human Alliance typically helps. We are working with the Human Alliance to help such individuals. Overall, how much money would you be willing to donate to help these people?” Unlike in the image task, participants were not prompted with a cost anchor, but were instead asked to “enter any amount” in an open-ended response box. They did not see any of the images.

Donation avoidance. Donation avoidance was assessed as in Study 2.

Individual differences. Trait empathy and fear of compassion were collected using the same measures as in Study 2. I assessed disgust sensitivity using the Disgust Propensity and Sensitivity Scale (Olatunji et al., 2007). This 16-item measure assesses readiness to experience disgust (e.g., “I become disgusted more easily than other people”). I predicted that cost would only influence emotional responses for people low in disgust sensitivity, because highly disgust sensitive individuals would be more likely to construe ambiguous affect as disgust. I assessed emotion regulation skill using the 8-item Strategies sub-scale of the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004). The Strategies sub-scale assesses emotion regulation skill (e.g., “When I’m upset, I believe that I will remain that way for a long time”) and predicted compassion regulation in prior research (Cameron & Payne, 2011, Experiment 2). I predicted that regulation skill would be associated with reduced compassion, particularly in the high cost condition. Finally, participants reported gender, age, and ethnicity.

Results

Manipulation checks

First, I examined whether cost condition influenced the perceived cost of helping in the two conditions where this was measured (high cost, low cost). Participants in the high cost condition did not report that helping seemed more costly than participants in the low cost condition, $F(1, 141) = .33, p = .57, \eta^2 = .00$. Second, I examined whether cost condition influenced hypothetical donation amount, which was measured in all three conditions. Cost condition influenced hypothetical donation, $F(2, 197) = 7.90, p = .001, \eta^2 = .07$, as hypothetical donation was larger in the high cost condition ($M = \$63.34, SD = \121.60) than in the low cost ($M = \$14.92, SD = \8.70), $p = .001$, and control conditions ($M = \$24.44, SD = \9.58), $p = .01$. Although participants in the high cost condition did not report that helping seemed more costly, their larger donations suggest that they may have encountered homeless individuals with costly helping in mind.

Self-other similarity ratings

Primary analysis. Next, I examined whether the motivational manipulation influenced my indirect measure of compassion: self-other similarity to weak social groups. I computed an index of self-other similarity to weak social groups by multiplying the similarity rating for each group by its previously-normed strength rating, and then summing these products (strength norms were drawn from Oveis et al., 2010). Self-other ratings were scaled so higher numbers meant greater distance from self, and the strength norms were scaled so negative numbers indicated a relatively weak group whereas positive numbers indicated a relatively strong group. Thus, a negative index means greater similarity to strong groups and a positive index means greater similarity to weak groups (analytic strategy drawn from Oveis et al., 2010).

I conducted a univariate ANOVA examining the influence of cost condition on similarity to weak groups. Cost condition did not influence similarity, $F(2, 200) = .14, p = .87, \eta^2 = .00$. Figure 6 displays similarity to weak social groups by cost condition. Similarity to weak social groups was highest in the high cost condition ($M = 7.13, SD = 14.79$), followed by the control ($M = 6.54, SD = 15.94$) and low cost ($M = 5.73, SD = 16.18$) conditions. Similarity ratings did not correlate with the manipulation checks of helping cost, $r(141) = .03, p = .73$, or hypothetical donation, $r(198) = .03, p = .69$. In sum, manipulating cost did not change similarity to weak groups.

Secondary analyses. Next, I conducted similar analyses testing four potential moderators: fear of compassion ($\alpha = .91$), trait empathy ($\alpha = .88$), emotion regulation skill ($\alpha = .92$), and disgust sensitivity ($\alpha = .91$). Fear of compassion, trait empathy, and emotion regulation skill were not influenced by cost condition (p 's $> .18$) and did not moderate the influence of cost condition on similarity judgments (p 's $> .34$). Similarity to weak groups was not associated with trait empathy, $r(200) = -.04, p = .58$, or emotion regulation skill, $r(200) = .08, p = .25$, but correlated negatively with fear of compassion, $r(201) = -.14, p = .02$. Similarity to weak groups correlated positively with self-reported compassion, $r(201) = .14, p = .04$, and negatively with disgust, $r(201) = -.21, p = .002$. The current study thus conceptually replicates the earlier fear of compassion correlational findings with an indirect measure of compassion.

Finally, I could not test disgust sensitivity as a moderator because it was influenced by the manipulation, $F(2, 199) = 3.19, p = .04, \eta^2 = .03$. Participants in the high cost condition reported higher disgust sensitivity ($M = 2.72, SD = .67$) than participants in the low cost condition ($M = 2.44, SD = .69$), $p = .04$, but not more than

participants in the control condition ($M = 2.52$, $SD = .65$), $p = .25$. Thus, imposing high cost increased disgust sensitivity. Corroborating this finding, disgust sensitivity correlated marginally with the helping cost manipulation check, $r(140) = .15$, $p = .08$, and the hypothetical donation manipulation check, $r(197) = .13$, $p = .07$.

Explicit emotion ratings

Primary analysis. Next, I turned to whether the cost manipulation influenced self-reported emotions. Correlational analyses revealed that compassion and disgust were negatively correlated, $r(202) = -.21$, $p = .02$, disgust and distress were positively correlated, $r(202) = .31$, $p < .001$, and compassion and distress were positively correlated, $r(202) = .39$, $p < .001$. I analyzed results using a repeated measures ANOVA with emotion type, cost condition, and the interaction between the two. There was a main effect of emotion type, $F(2, 398) = 4.37$, $p = .01$, $\eta^2 = .02$. Although compassion ($M = 3.01$, $SD = 1.09$) did not differ from disgust ($M = 2.76$, $SD = 1.12$), $p = .15$, or distress ($M = 3.04$, $SD = 1.13$), $p = .96$, participants reported less disgust than distress, $p = .01$. However, there was not a main effect of cost condition, $F(2, 199) = .46$, $p = .63$, $\eta^2 = .01$, or an emotion type by cost condition interaction, $F(4, 398) = .28$, $p = .89$, $\eta^2 = .00$. Figure 7 displays emotion intensity by emotion type and cost condition. Overall, the cost manipulation did not impact explicit emotion ratings.

Next, I examined whether individual differences in the helping cost manipulation check moderated emotion ratings. Perceived cost moderated the influence of emotion type on emotion intensity, $F(2, 276) = 3.68$, $p = .03$, $\eta^2 = .03$. Figure 8 displays emotion intensity by emotion type and perceived helping cost. At high helping cost (+1 SD), there were no differences between compassion ($M = 2.99$), disgust ($M = 3.05$), and distress (M

= 3.19), p 's > .14. By contrast, participants who felt that helping cost was low (-1 *SD*) reported more compassion ($M = 3.08$) than disgust ($M = 2.48$), $p = .01$, but not more compassion than distress ($M = 2.82$), $p = .18$. This interaction was driven by disgust, as disgust correlated positively with the helping cost manipulation check, $r(140) = .26$, $p = .002$, but compassion did not, $r(140) = .04$, $p = .63$. Even though the manipulation did not change perceived helping cost, people who thought that helping was not very costly were more likely to experience compassion rather than disgust.

Because the hypothetical donation check came after the similarity ratings and emotion reports, it makes less sense to test whether it moderated these outcomes. However, compassion correlated positively with the hypothetical donation manipulation check, $r(199) = .21$, $p = .003$, whereas disgust did not, $r(199) = .001$, $p = .99$.

Secondary analyses. Next, I conducted identical analyses examining each of three moderators: trait empathy, emotion regulation skill, and fear of compassion. Trait empathy and emotion regulation skill did not moderate the influence of emotion type on emotion intensity (p 's > .12), and there were no 3-way interactions with cost condition (p 's > .06). For fear of compassion there was no 3-way interaction ($p = .31$), but there was a significant emotion type by fear of compassion interaction, $F(2, 392) = 39.26$, $p < .001$, $\eta^2 = .17$. Figure 9 displays emotion intensity by emotion type and measured fear of compassion. Participants who were high (+1 *SD*) in fear of compassion reported less compassion ($M = 2.55$) than disgust ($M = 3.16$), $p < .001$, and less compassion than distress ($M = 2.97$), $p = .001$. Participants who were low (-1 *SD*) in fear of compassion reported more compassion ($M = 3.46$) than disgust ($M = 2.35$), $p < .001$, more compassion than distress ($M = 3.13$), $p = .02$, and more distress than disgust, $p < .001$.

Fear of compassion predicted reduced compassion, $\beta = -.39, p < .001$, increased disgust, $\beta = .34, p < .001$, and did not predict distress, $\beta = -.08, p = .25$. Replicating earlier studies, fear of compassion predicted increased disgust and decreased compassion.

Donation avoidance

Next, I examined selective exposure to a donation opportunity. As in the prior study, the motivational manipulation might change behavioral outcomes even if it does not influence self-reported emotions. In this sample, 180 participants chose not to access the donation link, whereas 16 participants (8.2% of the sample) did. I conducted a logistic regression predicting binary donation avoidance from two dummy coded variables representing the high cost-low cost and high cost-control contrasts. The model correctly classified 91.8% of participants. The high v. low cost contrast was not significant, $B = .36, S.E. = .63, \text{Exp}(B) = 1.43, p = .57$, nor was high cost v. control, $B = .15, S.E. = .63, \text{Exp}(B) = 1.16, p = .82$. Figure 10 displays the proportion of participants who avoided or accessed the donation link by cost condition. Donation avoidance did not correlate with checks of helping cost ($B = .05, p = .86$) or hypothetical donation ($B = .001, p = .76$). Fear of compassion, trait empathy, and regulation skill did not predict donation avoidance (p 's $> .51$) or interact with cost condition (p 's $> .32$). Donation avoidance was also not associated with similarity ($B = -.02, p = .19$), compassion ($B = -.12, p = .61$), or disgust ($B = .16, p = .52$). Unlike Study 2, in Study 3 the motivational manipulation did not influence a compassion-related behavior (although in this study, the behavior was not related to self-reported compassion).

Discussion

The results for Study 3 provide mixed evidence for strategic emotion construction. Manipulating helping cost did not change indirect similarity ratings or self-reported emotions. The only effect of the cost manipulation was to increase disgust sensitivity: thinking about costly donations caused an increased readiness to experience disgust.

Although the manipulation did not have consistent effects, individual differences in perceived helping cost moderated self-reported emotions in a manner consistent with strategic emotion construction. Participants who thought that helping would not be costly were more likely to report compassion than disgust or distress, whereas this difference did not emerge for participants who perceived helping as costly. Similarly, participants who were high in fear of compassion reported more compassion than disgust or distress, but participants who were low in fear of compassion showed the reverse pattern. Fear of compassion also predicted reduced similarity to weak social groups. However, neither fear of compassion nor perceived cost predicted donation avoidance.

The results of Studies 2 and 3 revealed that measured motivational orientations—in particular, fear of compassion—were more likely to be associated with changes in emotion than were manipulations of fear of compassion or helping cost. One explanation for this pattern of results is that a different manipulation may be more effective. For instance, pairing the lay theories manipulation in Study 2 with the donation content of Study 3 may be necessary to create sufficient incentive to shift self-reported emotional responding. Another explanation is that a different kind of measurement technique may be required to capture strategic emotion construction effects that are due to short-term motivational manipulations. People who have chronic motivations to avoid compassion may have no problem explicitly reporting less compassion for suffering victims. But for

people who are less comfortable with such a response, short-term motivational manipulations might have greater effects on implicit measures of emotion.

Chapter 7

Study 4: Implicit Measures of Compassion

Study 4 was designed to bypass social desirability concerns and capture compassion at an implicit level. As the results of Studies 2 and 3 suggest, bypassing response correction may be necessary to reveal strategic emotion construction. Implicit measures are useful in getting past response biases (Gawronski & Payne, 2010), which has long been a concern for constructionist theories of perception (Erdelyi, 1974). Study 4 utilized two implicit measures to capture strategic emotion construction.

The first implicit measure was an approach-avoidance task (Chen & Bargh, 1999; Krieglmeier & Deutsch, 2010; Neumann, Hulslenbeck, & Seibt, 2004). According to the reflective-impulsive model of social behavior (Deutsch & Strack, 2004), motivational approach-avoidance tendencies mediate the link between automatic affective reactions and behaviors. For instance, Chen and Bargh (1999) had participants evaluate positive or negative words as “good” or “bad” by pulling a lever toward themselves or pushing it away, respectively. People were faster to pull the lever for positive words and push the lever for negative words, suggesting automatic evaluations toward the words were guiding automatic approach and avoidance tendencies. These effects did not depend on a conscious goal to evaluate the words, as they still emerged even when the word evaluation task was replaced with the goal of removing the word as quickly as possible from the screen (Chen & Bargh, 1999, Study 2).

Building on these findings, Neumann and colleagues (2004) exposed participants to photos of AIDS patients as part of a memory task. In a subsequent approach-avoidance task, participants saw photos of the AIDS patients or new individuals. Participants were told to move a computer mouse toward themselves (approach) when they saw an old photo, or away from themselves (avoidance) when they saw a new photo; this assignment was switched in a second block of trials. The old/new instructions were meant to replicate Chen and Bargh's (1999) findings that automatic approach-avoidance tendencies emerge without a conscious evaluation goal. People were faster to respond to images of AIDS patients when they made the avoidance movement than when they made the approach movement (Neumann et al., 2004). This automatic avoidance response correlated with implicit, but not explicit, attitudes toward AIDS patients.

I used a similar approach-avoidance task to assess strategic emotion construction. Whereas compassion motivates people to approach and care for victims in need (Batson, 2011a; Goetz et al., 2010; Mikulincer, Shaver, Gillath, & Nitzberg, 2005), disgust motivates people to repel noxious objects and individuals (Oaten, Stevenson, & Case, 2009; Rozin, Haidt, & McCauley, 2008; Sherman & Haidt, 2011). If people construct ambiguous affect as compassion, then they should display greater approach behaviors; if people construct affect as disgust, they should display greater avoidance behaviors. There is suggestive evidence that strategic emotion construction could matter for approach-avoidance behaviors. For instance, people who are highly disgust-sensitive—who may be more prone to construct ambiguous affect as disgust—are more likely to display automatic avoidance responses to stigmatized individuals (Pryor et al., 2004). By

manipulating helping cost, I examined whether strategic emotion construction (as compassion v. disgust) leads to changes in automatic approach-avoidance tendencies.

The second implicit measure was the affect misattribution procedure (AMP; Payne et al., 2005). During the AMP, participants are told to judge ambiguous Chinese pictographs as pleasant or unpleasant and to prevent the primes that precede the pictographs from influencing their judgments. People tend to misattribute their affective reaction toward the primes to their judgments about the pictographs. Even though people are aware of the supraliminal primes, they are unaware of how the primes influence their judgments, and so are unable to control against this influence. Because these misattributions occur despite intentions to the contrary, there is reason to believe that such effects occur automatically and despite the exertion of control (Payne et al., 2005). Inducing social pressure is less likely to influence AMP performance than explicit measures (Payne, Govorun, & Arbuckle, 2008), suggesting that this measure should be less sensitive to response bias.

Although the AMP has typically been used to capture core affect, it can also be used to assess discrete emotions (Arbuckle, Payne, & Mowrer, 2013). If people have interpreted an ambiguous affective prime as one discrete emotion rather than another, then they should interpret subsequent pictographs as representing the same discrete emotion. Using the AMP allows for the assessment of discrete emotions without having people report their emotions toward primes. Using the AMP to measure discrete emotions carries an advantage over facial, physiological, and neurological measures because the latter measures are more likely to capture affect than discrete emotions (cf. Arbuckle et al., 2013; Mauss & Robinson, 2009; Quigley, Lindquist, & Barrett, in press).

Arbuckle and colleagues (2013) conducted multiple studies to validate a discrete emotions AMP. They presented participants with image primes that had been normed to elicit disgust, fear, happiness, lust, or neutral affect. Participants were more likely to identify pictographs as referring to a specific discrete emotion (e.g., disgust) when they had been seen emotionally consistent primes (e.g., disgusting images) by comparison to emotionally inconsistent primes. Importantly, Arbuckle and colleagues established differentiation of discrete emotions within valence: people judged pictographs more disgusting after disgust (v. fear) primes, and as more fearful after fear (v. disgust) primes. Emotion regulation instructions did not change AMP performance, but did change self-reported emotion, suggesting the AMP is resistant to response bias (Arbuckle et al., 2013, Study 2). Motivational factors also proved important, as highly disgust sensitive participants were more likely to make disgust judgments after ambiguous primes, but were not more likely to make fear judgments after ambiguous primes (Arbuckle et al., 2013, Study 3). This moderation by disgust sensitivity is important because it suggests that the AMP can measure both core affect and discrete emotion, despite recent claims to the contrary (e.g., Blaison, Imhoff, Huhnel, Hess, & Banse, 2012).

In the current experiment, I used a discrete emotions AMP in which some primes were relatively unambiguous elicitors of either compassion or disgust, and other primes were ambiguous triggers of either. The current AMP required participants to judge whether each pictograph elicited either compassion or disgust. Much like disgust sensitivity made people more likely to construe ambiguous affect as disgust rather than fear, I predicted that manipulating cost would lead people to conceptualize affect as disgust rather than compassion.

In addition to addressing response bias, Study 4 was also designed to show that strategic emotion construction is most successful for ambiguous stimuli. Much like Balcetis and Dunning (2006) established that motivated construal effects only emerged for ambiguous percepts—but not for percepts that were unambiguously one object or another—strategic emotion construction should occur most strongly in response to ambiguous affective images that could trigger either compassion or disgust. I predicted that when images were ambiguous, participants in the high cost condition would be more likely than participants in the other conditions to judge pictographs as evoking disgust rather than compassion. I also included images that were normed as less ambiguous elicitors of compassion or disgust. Although these images were not completely unambiguous, they can be seen as more prototypical stimuli in which compassion or disgust concepts are more powerful “attractor states.” These stimuli should afford less flexibility during the emotion construction process, and so be associated with less strategic emotion construction.

Method

Participants

I recruited 112 participants from the Psychology 101 research pool at the University of North Carolina at Chapel Hill. Participants were randomly assigned to the high cost, low cost, or no-request control conditions. I excluded one participant from the high cost condition who reported failing to think about a donation during the image task.

Materials and Procedures

Image task. Participants completed the image task as in Study 3.

Approach-avoidance task. I assessed automatic approach-avoidance tendencies using the manikin task (Krieglmeyer & Deutsch, 2010). I used the manikin task instead of

other variants, such as the joystick task, because it tends to reveal higher effect sizes and exhibit greater sensitivity (Krieglmeyer & Deutsch, 2010). In this task, an image appeared in the center of the screen. A manikin figure appeared randomly above or below the image, and participants were told to move the manikin toward or away from the image. Figure 11 displays a sample manikin task trial. Participants were told:

“In the next task you will be presented with an image. This task requires that you respond by moving a stick figure either toward the image or away from the image.

The stick figure can appear either above or below the image. Please respond as quickly as possible while making as few mistakes as possible. Responding too slowly or making too many mistakes will result in an uninterpretable score.”

Participants saw one of three types of image in the center of the screen:

ambiguous, compassion, or disgust. The ambiguous images were the same homeless person images that participants rated in the image task. The new images were four compassion images pre-tested as eliciting more compassion than disgust (drawn from Oveis et al., 2010) and four disgust images pre-tested as eliciting disgust as the modal response (drawn from the International Affect Picture System; Lang, Bradley, & Cuthbert, 2003). On one block of trials, participants were instructed to approach the ambiguous images that they had seen in the donation task, and to avoid compassion and disgust images that they had not seen previously. The old/new instructions were drawn from past studies in order to assess automatic approach-avoidance tendencies in the absence of conscious evaluation goals (Neumann et al., 2004). Although these instructions confound image ambiguity with familiarity from past exposure, the critical comparisons are the

relative influence of cost condition within each prime category, rather than across categories. Participants were instructed to do the following:

“In this part of the task you will move the stick figure *toward old pictures* (pictures you saw in the earlier part of the experiment) and move the stick figure *away from new pictures* (pictures that you did not see earlier in the experiment). Remember: Press 8 to move the figure upward, press 2 to move the figure downward. It will take three presses of the same key to complete the trial. Making too many errors or responding too quickly will lead to uninterpretable scores.”

On another block of trials, participants were instructed to avoid the ambiguous images and to approach the compassion and disgust images: “In this part of the task you will move the stick figure *away from old pictures* (pictures you saw in the earlier part of the experiment) and move the stick figure *toward new pictures* (pictures that you did not see earlier in the experiment).” The two blocks were counterbalanced and contained 48 trials each (16 trials per prime category, evenly split so that the manikin started at the top or bottom on half of the trials). Images were presented randomly within each block and remained on screen until participants entered three key presses. With each key press, the manikin figure moved either closer to or farther from the prime image in the center. If participants pressed the wrong key, they received an error message and advanced to the next trial. Before the test trials, participants took 12 practice trials. In the practice block, participants completed 6 trials with the first set of instructions (2 trials per prime type) and 6 trials with the second set of instructions (2 trials per prime type). Automatic avoidance tendencies for each category were computed by subtracting the mean reaction

time for correct responses (average of the 3 key presses) on avoidance trials from the mean reaction time for correct responses on approach trials (as in Neumann et al., 2004).

Affect misattribution procedure. Participants then completed the discrete emotions AMP. Participants were told the following:

“We will be showing you pairs of items flashed one after the other on the computer screen. First, you will see a photo. You should do nothing with the photos; they are simply there to signal that the second object is about to appear. The second item will be a Chinese symbol. Finally, you will see a square with black dots. This image will remain on the screen until you judge the Chinese symbol. You may notice yourself experiencing subtle feelings toward the Chinese symbols. We know from past research that people can often have subtle feelings toward ambiguous things like Chinese symbols. Your task is to judge whether the Chinese symbol makes you feel one of two emotions: compassion or disgust. In some cases, the Chinese symbols could make you experience subtle feelings of compassion. In other cases, the Chinese symbols could make you experience subtle feelings of disgust. As you complete this task, you should rely upon your gut feelings toward the Chinese symbols. On each trial of this task, you should press ‘C’ if you feel compassion in response to the Chinese symbol, or ‘D’ if you feel disgust in response to the Chinese symbol. You should not judge that you are always feeling compassion or that you are always feeling disgust. We know from previous research that people perform at above chance levels on this task if they rely on the gut feelings they have toward the Chinese symbols. This is why we are

interested in your feelings of compassion and disgust toward the Chinese symbols.”

Participants were then given a blatant warning about prime influence:

“It is important to note that images can sometimes bias people’s judgments of the symbols. We are interested in studying how people can avoid being biased by the images, so please try your absolute best not to let these images influence your judgment of the Chinese symbols! Give us an honest assessment of the symbols, regardless of the images that precede them.”

Participants completed one practice trial followed by 60 test trials. On each trial of the AMP, participants saw an image prime for 100 ms, followed by a Chinese pictograph for 100 ms, and then a black-and-white pattern mask until they entered their responses. Figure 12 displays a sample AMP trial. Primes were randomized, with 20 per category (ambiguous; compassion; disgust). One concern in the current design was contrast effects (Scherer & Lambert, 2009): people might exhibit less compassion to an ambiguous prime not because of strategic emotion construction, but because they saw a compassion prime on a previous trial. After each test trial, participants saw a yoked filler trial in which an affectively neutral White or Black face was presented as a prime. I included these filler trials in order to alleviate contrast effects. Controlling for responses to filler primes did not change the analyses reported below, so these trials will not be discussed further.

Explicit emotion ratings. Participants rated emotions as in Studies 1 and 2.

Fear of compassion. Participants took the Fear of Compassion scale as in prior studies.

Trait empathy. Participants completed the Empathy Quotient Short-Form as in prior studies.

Emotion regulation skill. Participants completed the full 36-item Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004).

Emotional granularity. I assessed emotional granularity, the ability to discriminate affective experience into discrete emotions (Lindquist & Barrett, 2008b). Emotional granularity facilitates emotion understanding and emotion regulation (Barrett et al., 2001; Wranik et al., 2007). Because it affords more possibilities for conceptualizing core affect, emotional granularity should facilitate strategic emotion construction. Participants viewed 10 scenarios from the Levels of Emotional Awareness Scale (Appendix II; Lane et al., 1990). For each scenario, participants reported each of six discrete emotions (from 1=Not at all to 5=Extremely): embarrassment, disappointment, boredom, anxiety/nervousness, sadness, and anger. These emotion terms captured both high- and low-arousal negative emotions (Pond et al., 2012). I computed emotion differentiation as the intra-class correlation coefficient (with absolute agreement) between the emotion ratings across all scenarios (Barrett et al., 2001; Pond et al., 2012; Tugade & Fredrickson, 2004). Higher coefficients reflect similar usage of distinct emotion terms to represent affective experience, suggesting low discrimination between discrete emotions (Lindquist & Barrett, 2008b). I predicted that emotional granularity would predict reduced compassion in the high cost condition.

Working memory capacity. The successful deployment of granular emotion concepts to conceptualize core affect may require sufficient working memory capacity (Lindquist & Barrett, 2008b). To examine this possibility, I assessed working memory

capacity (WMC) using a computation span task (Hofmann, Gschwendner, Friese, Wiers, & Schmitt, 2008; Oberauer et al., 2000). This task consisted of 15 trials. On each trial, equations were presented in sequential order for 3 seconds each. These equations consisted of either an addition (“ $2 + 2 = 4$ ”) or subtraction (“ $9 - 6 = 3$ ”) that always ended in a single digit. The equations were correct or incorrect (e.g., “ $8 - 4 = 1$ ”). Participants were told to remember the end digit of each equation, and after a certain number of trials enter those digits in sequence. As a secondary task, participants also reported whether the equation was true or false after it had been presented. The 15 test trials were divided into 3 blocks of 5 trials each. On the first trial of each block, participants saw four equations before the digit recall prompt. On each trial the number of equations increased by one, such that on the fifth trial of a block participants saw 8 equations before the recall prompt. Participants completed 2 practice trials. I computed WMC as the sum of correctly entered digit sequences. The average percentage of correct responses to the true/false secondary task was 97%, suggesting that participants were invested in the secondary task even as they were attempting to remember the digits.

Demographics. Finally, participants reported gender, age, ethnicity, socioeconomic status, and political orientation before being debriefed and dismissed.

Results

Approach-avoidance task

Primary analyses. First, I assessed strategic emotion construction by measuring impulsive approach and avoidance tendencies. If participants have conceptualized core affect as disgust rather than compassion, they should show increased avoidance; if they have constructed compassion, then they should show increased approach.

Nine participants did not complete the approach-avoidance task due to malfunction with DirectRT, leaving 103 participants with approach-avoidance data. I removed error trials (13% of responses) and latencies larger than three standard deviations of each subject's distribution of reaction times (2% of responses). To create an index of impulsive avoidance for each image category, I subtracted the mean response latency for avoidance trials from the mean response latency for approach trials, such that higher values indicate faster impulsive avoidance movements (Neumann et al., 2004).

First, I examined whether the motivational manipulation changed impulsive avoidance in different ways depending on image ambiguity. I analyzed the reaction time results using a repeated measures ANOVA examining the influence of image type, cost condition, and the interaction between the two. There was not a main effect of cost condition, $F(2, 101) = .42, p = .66, \eta^2 = .01$, or a condition by image type interaction, $F(4, 202) = 1.49, p = .21, \eta^2 = .03$. Image type influenced impulsive avoidance, $F(2, 202) = 6.42, p = .002, \eta^2 = .06$. Figure 13 displays impulsive avoidance by image type and cost condition. Participants were more avoidant of disgust images ($M = 92.91$ ms, $SD = 355.02$ ms) than ambiguous homeless images ($M = -175.73$ ms, $SD = 300.95$ ms), $p = .01$, but not more than compassion images ($M = -25.66$ ms, $SD = 712.16$ ms), $p = .31$.

I also examined the influence of cost condition on impulsive avoidance within each image condition. For ambiguous images, cost condition had no influence on impulsive avoidance, $F(2, 101) = .82, p = .45, \eta^2 = .02$. Impulsive avoidance was highest in the high cost condition ($M = -127.87$ ms, $SD = 282.54$ ms), followed by the low cost ($M = -170.91$ ms, $SD = 276.97$ ms) and control conditions ($M = -221.89$ ms, $SD = 339.06$ ms). The negative mean values indicate people were more likely to impulsively approach,

rather than avoid, images of homeless individuals. Cost condition did not influence impulsive avoidance of compassion images, $F(2, 101) = 1.59, p = .21, \eta^2 = .03$, or disgust images, $F(2, 101) = .46, p = .63, \eta^2 = .01$. In sum, manipulating cost did not change impulsive avoidance of homeless individuals on the approach-avoidance task.

Moderator analyses. Next, I conducted identical analyses with six possible moderators: fear of compassion ($\alpha = .78$), emotional granularity ($M = .40, SD = .41$), disgust sensitivity ($\alpha = .84$), trait empathy ($\alpha = .77$), emotion regulation skill ($\alpha = .90$), and working memory capacity ($M = 60\%$ correct digit entries, $SD = 24.05\%$). Because granularity was skewed, I log-transformed it for further analyses. None of the moderators were influenced by the manipulation (p 's $> .33$). Granularity, disgust sensitivity, trait empathy, emotion regulation skill, and working memory capacity did not moderate the influence of cost condition on impulsive avoidance of ambiguous images (p 's $> .34$).

In earlier studies, fear of compassion predicted more disgust and less compassion on self-report measures. In the current study, fear of compassion interacted with cost condition to predict impulsive avoidance of ambiguous images, $F(2, 95) = 3.21, p = .045, \eta^2 = .06$. There was no fear x cost interaction for the compassion images ($p = .69$) or disgust images ($p = .36$). Figure 14 displays impulsive avoidance of ambiguous images by cost condition and measured fear of compassion. To understand this interaction, I examined how manipulating cost influenced impulsive avoidance at high and low levels of fear of compassion. For people who were high in fear of compassion ($+1 SD$), impulsive avoidance was higher in the high cost condition ($M = -64.07$) compared to the low cost condition ($M = -268.17$), $p = .05$. There were not differences between the high cost and control ($M = -163.96$) conditions, $p = .33$, or the low cost and control conditions,

$p = .32$. For people who were chronically motivated to avoid compassion, increasing the price of helping made them more behaviorally avoidant of homeless individuals.

At low fear of compassion ($-1 SD$), participants in the low cost condition ($M = -89.55$) were marginally more avoidant compared to the control condition ($M = -280.54$), $p = .06$. There were not differences between the high cost condition ($M = -237.64$) and the other two conditions, p 's $> .18$. It is less clear why low helping cost would lead to more avoidance for people who were not motivated to avoid compassion. To understand this further, I predicted impulsive avoidance from fear of compassion within each cost condition. In the control condition, fear of compassion did not predict impulsive avoidance, $\beta = .17$, $p = .33$. Fear of compassion marginally predicted reduced impulsive avoidance in the low cost condition, $\beta = -.31$, $p = .07$, and greater impulsive avoidance in the high cost condition, $\beta = .31$, $p = .09$. Depending on salient helping costs, fear of compassion related to impulsive avoidance in different ways.

In summary, fear of compassion interacted with helping cost to predict impulsive avoidance of homeless individuals. Participants who were high in fear of compassion became more avoidant when high costs were salient, compared to when low costs were salient. When images were ambiguous and helping cost was high, individuals who were high in fear of compassion may have engaged in strategic emotion construction, as evidenced by increased impulsive avoidance. When helping cost was low, these individuals showed decreased impulsive avoidance, possibly because the trivial costs defused financial motivations to avoid victims. This pattern suggests that approach-avoidance tendencies—as indicators of compassion and disgust—are defined by an interaction between situational cost contingencies and trait fear of compassion.

Affect misattribution procedure (AMP)

Primary analyses. The foregoing results revealed that manipulating motivation influenced approach-avoidance tendencies, in interaction with trait fear of compassion. Next, I examined whether manipulating helping cost would change compassion judgments on the AMP. I excluded 2 participants that recognized the Chinese pictographs and 1 participant who pressed the same key on all trials of the AMP, leaving a sample of 108 participants with AMP data. I computed the proportion of compassion responses within each prime category (ambiguous; compassion; disgust).

I analyzed results using a repeated measures ANOVA examining the influence of prime type, cost condition, and the interaction between the two. Compassion judgments differed by prime type, $F(2, 210) = 71.20, p < .001, \eta^2 = .40$. Participants showed more compassion judgments after compassion primes ($M = .71, SD = .21$) than after disgust primes ($M = .40, SD = .21$) or ambiguous primes ($M = .40, SD = .25$), both p 's $< .001$. Compassion judgments did not differ after disgust and ambiguous primes ($p = .99$). The mean proportions for these two categories were less than .50, indicating that participants were more likely to respond with implicit disgust in these two prime categories. Surprisingly, even though the ambiguous homeless photos had been normed to elicit equal levels of compassion and disgust, AMP responses suggest that participants treated them (implicitly) like disgust primes.

There was not a main effect of cost condition, $F(2, 105) = .23, p = .80, \eta^2 = .00$, or interaction with prime type, $F(4, 210) = .52, p = .72, \eta^2 = .01$. Figure 15 displays proportion of AMP compassion responses by prime type and cost condition. In summary, participants responded to ambiguous homeless primes with more implicit disgust than compassion, and this pattern did not change when cost was manipulated experimentally.

Moderator analyses. Next, I conducted identical analyses with four possible moderators: fear of compassion, emotion regulation skill, trait empathy, disgust sensitivity, and emotional granularity. Fear of compassion, emotion regulation skill, trait empathy, and working memory capacity did not moderate the influence of prime type on implicit compassion (p 's $> .25$), nor were there significant 3-way interactions with cost condition (p 's $> .32$). Although there was not a significant 3-way interaction with disgust sensitivity ($p = .59$), disgust sensitivity moderated the effect of prime type ($p = .003$). Replicating Arbuckle et al. (2013), disgust sensitivity predicted reduced compassion (or increased disgust) after ambiguous primes, $\beta = -.24$, $p = .01$, and marginally increased compassion after compassion primes, $\beta = .18$, $p = .08$, but did not predict compassion after disgust primes, $\beta = -.09$, $p = .37$. The finding for ambiguous primes suggests that disgust-sensitive individuals may resolve ambiguous affect as disgust regardless of cost.

Next, I examined whether emotional granularity facilitated strategic emotion construction on the AMP. Emotional granularity did not predict compassion, $F(1, 98) = .01$, $p = .92$, $\eta^2 = .00$, nor was there an interaction with prime type, $F(2, 196) = 1.98$, $p = .14$, $\eta^2 = .02$. The interaction between emotional granularity and cost condition was marginal, $F(2, 98) = 2.79$, $p = .07$, $\eta^2 = .05$, but was qualified by the 3-way interaction between prime type, emotional granularity, and cost condition, $F(4, 196) = 3.40$, $p = .01$, $\eta^2 = .07$. Figure 16 displays compassion after each type of prime within the high cost condition, at high and low granularity. To explore this interaction, I examined the prime by granularity interaction within each condition. The interaction was significant in the high cost condition, $F(2, 60) = 6.84$, $p = .002$, $\eta^2 = .19$, but not the other two (p 's $> .15$).

I then conducted linear regressions within the high cost condition, predicting compassion responses in each of the three prime categories from emotional granularity. Granularity predicted increased compassion after compassion primes, $\beta = .41, p = .01$, and decreased compassion (i.e., increased disgust) after disgust primes, $\beta = -.38, p = .04$. Critically, emotional granularity predicted reduced compassion after ambiguous primes, $\beta = -.38, p = .04$. Figure 17 displays the influence of cost condition on compassion after ambiguous primes at high and low emotional granularity. Notably, this relationship did not emerge in the low cost ($\beta = -.15, p = .39$) or control ($\beta = .22, p = .20$) conditions. Only when helping cost was high did granularity predict less compassion for ambiguous primes on the AMP.

Another way to break down the interaction is to examine whether the effect of cost condition on compassion after ambiguous primes is significant at high or low levels of emotional granularity (also presented in Figure 17). Participants who were high (+1 *SD*) in emotional granularity did not show any differences in compassion across the three conditions (p 's > .37). On the other hand, participants who were low (-1 *SD*) in emotional granularity showed higher compassion after ambiguous primes in the high cost condition compared to the control condition, $p = .01$, but the other two simple effects were not significant (p 's > .17). Imposing high cost (v. no cost) increased compassion after ambiguous primes for *low* granular participants. This finding was unexpected; it may be that imagining large donations toward homeless individuals creates compassion through a consistency effect, unless there is sufficient emotional granularity to block this conceptualization. However, such an explanation is speculative and requires further validation in future experiments.

Successful deployment of emotion concepts may require sufficient working memory capacity to actively maintain these concepts (Lindquist & Barrett, 2008b). Controlling for WMC did not change the analyses above, and WMC did not moderate the interaction of cost condition with emotional granularity for ambiguous primes ($p = .56$).

In summary, when helping cost was high, emotional granularity predicted changes in emotional responses. Participants who more emotionally granular displayed more precise emotional responses to unambiguous primes, by showing increased compassion after compassion primes and increased disgust after disgust primes. When primes were ambiguous, granular individuals may have engaged in strategic emotion construction by showing decreased compassion, but only when the cost of helping was high.

Explicit emotion ratings

Primary analysis. Thus far, the manipulation of helping cost influenced performance on both implicit measures of compassion, but in interaction with either fear or compassion or emotional granularity. In Studies 2 and 3, motivational manipulations did not influence explicit emotion ratings. Next, I examined whether the helping cost manipulation would change self-reported emotions, in contrast to earlier studies. Compassion and disgust were negatively correlated, $r(109) = -.37, p < .001$, disgust and distress were positively correlated, $r(109) = .54, p < .001$, and compassion and distress were uncorrelated, $r(109) = .01, p = .90$. Results were analyzed using a repeated measures ANOVA with emotion type, cost condition, and the interaction between the two. There was a main effect of emotion prime, $F(2, 212) = 35.92, p < .001, \eta^2 = .25$, but no main effect of cost condition, $F(2, 106) = .6, p = .57, \eta^2 = .01$, or emotion type by condition interaction, $F(4, 212) = 1.20, p = .31, \eta^2 = .02$. Figure 18 displays emotion intensity by emotion type and cost condition. Participants felt less compassion ($M = 3.44$,

$SD = 1.29$) than disgust ($M = 4.69, SD = 1.19$), $p < .001$, and less compassion than distress ($M = 4.59, SD = 1.20$), $p < .001$. Disgust and distress did not differ, $p = .80$. Once again, manipulating motivation did not influence explicit emotion ratings.

Moderator analyses. Next, I conducted identical analyses with five moderators: emotional granularity, working memory capacity, emotion regulation skill, trait empathy, fear of compassion, and disgust sensitivity. Granularity, WMC, emotion regulation skill, and trait empathy did not moderate the influence of emotion type on emotion intensity (p 's $> .17$), nor were there 3-way interactions with cost condition (p 's $> .07$).

Replicating earlier studies, fear of compassion moderated the effect of emotion type on emotion intensity, $F(2, 206) = 4.95, p = .01, \eta^2 = .05$. Figure 19 displays emotion intensity by emotion type and measured fear of compassion. Participants who were high in fear of compassion (+1 SD) reported less compassion ($M = 3.32$) than disgust ($M = 5.02$), $p < .001$, and less compassion than distress ($M = 4.57$), $p < .001$. Participants low in fear of compassion (-1 SD) also reported less compassion ($M = 3.57$) than disgust ($M = 4.30$), $p = .03$, and less compassion than distress ($M = 4.60$), $p < .001$. Fear of compassion was correlated with disgust, $r(109) = .28, p = .004$, but not compassion, $r(109) = -.09, p = .36$, or distress, $r(109) = -.03, p = .75$. There was no interaction between emotion type, cost condition, and fear of compassion ($p = .91$).

Next, I examined disgust sensitivity as a moderator. There was a marginal interaction between emotion type and disgust sensitivity, $F(2, 206) = 2.88, p = .06, \eta^2 = .03$, but not a 3-way interaction with cost condition ($p = .51$). Participants who were high in disgust sensitivity (+1 SD) reported less compassion ($M = 3.40$) than disgust ($M = 4.98$), $p < .001$, and less compassion than distress ($M = 4.79$), $p < .001$. Participants who

were low in disgust sensitivity ($-1 SD$) also reported less compassion ($M = 3.53$) than disgust ($M = 4.34$), $p = .02$, and less compassion than distress ($M = 4.39$), $p = .002$. Disgust sensitivity was correlated with disgust, $r(109) = .23$, $p = .02$, but not compassion, $r(109) = -.03$, $p = .78$, or distress, $r(109) = .15$, $p = .12$. Like fear of compassion, disgust sensitivity predicted increased disgust toward homeless individuals.

Thus, although my helping cost manipulation influenced implicit measures of compassion, it did not influence explicit measures. For the self-reported emotions I saw a pattern of results much like in Studies 2 and 3. Manipulated cost did not change explicit emotions, but these ratings were associated with measured fear of compassion.

Relationships between compassion measures

Next, I examined the relationships between the compassion measures. Impulsive avoidance of ambiguous images was not related to AMP compassion responses to any of the prime categories (p 's $> .08$), or to explicit emotion ratings (p 's $> .30$). Impulsive avoidance of ambiguous images did not moderate the influence of cost condition on AMP compassion responses to ambiguous primes, $F(2, 95) = .27$, $p = .77$, $\eta^2 = .01$. For explicit emotion ratings, impulsive avoidance of ambiguous primes did not moderate the influence of emotion type on emotion intensity, $F(2, 190) = 2.04$, $p = .13$, $\eta^2 = .02$, nor was there a 3-way interaction with cost condition, $F(4, 190) = 1.56$, $p = .19$, $\eta^2 = .03$.

AMP compassion responses to ambiguous primes correlated with explicit compassion, $r(104) = .23$, $p = .02$, disgust, $r(104) = -.40$, $p < .001$, and distress, $r(104) = -.24$, $p = .01$. AMP compassion responses to disgust primes correlated with explicit compassion, $r(104) = .21$, $p = .04$, with disgust, $r(104) = -.32$, $p = .001$, and negatively with distress, $r(104) = -.17$, $p = .08$. The first set of correlations may be stronger than the

second set because the implicit and explicit measures corresponded to the same images of homeless individuals; they may be similar because homeless primes were grouped as implicit disgust primes on the AMP. AMP compassion responses to compassion primes did not correlate with explicit emotion ratings (p 's > .24). Lastly, AMP compassion after ambiguous primes did not interact with emotion type and cost condition to predict emotion intensity, $F(4, 196) = 1.19, p = .47, \eta^2 = .02$. Thus, performance on the approach-avoidance task was unrelated to the AMP and explicit emotion ratings, which were related to each other.

Discussion

Using implicit measures, Study 4 revealed the strongest evidence yet for strategic emotion construction. Helping cost interacted with fear of compassion and emotional granularity to predict implicit compassion during the approach-avoidance task and AMP. On the approach-avoidance task, fear of compassion moderated the influence of helping cost on impulsive avoidance of ambiguous homeless images. For people who were high in fear of compassion, imposing high cost increased impulsive avoidance compared to when a low cost was imposed, but not compared to when no cost was imposed. Moreover, fear of compassion predicted more avoidance when cost was high and less avoidance when cost was low. Chronic fear of compassion interacted with the situation to prepare effective action: only when costs were high did the motivation to avoid compassion lead to automatic avoidance tendencies. Additionally, strategic emotion construction only emerged when there was sufficient ambiguity, as fear of compassion did not interact with cost to predict avoidance of less ambiguous compassion or disgust images.

On the AMP, emotional granularity moderated the influence of helping cost on compassion judgments after ambiguous homeless primes. Within the high cost condition, more granular participants made fewer compassion judgments after ambiguous homeless primes; importantly, this pattern did not emerge in the low cost or control conditions. Emotional granularity also predicted more compassion after compassion primes and more disgust after disgust primes. Thus, strategic emotion construction only occurred when there was ambiguity to conceptualize core affect in a self-interested way.

Once again, helping cost did not influence self-reported emotions. Social desirability may lead to response correction on explicit measures, which is less feasible on implicit measures. As before, measured fear of compassion was associated with increased disgust. Absolute levels of explicit emotions differed from earlier studies, as even participants low in fear of compassion reported less compassion than disgust or distress. College students in this lab study may have had less exposure to homeless individuals than the adults recruited through MTurk in Studies 1-3, which may explain this difference across samples.

Finally, the three compassion measures may have captured different aspects of the compassion response. Although the approach-avoidance task was sensitive to helping cost and fear of compassion—suggesting that it may capture motivational aspects of the helping situation—it was unrelated to AMP scores and self-reported emotions. On the other hand, the AMP was sensitive to helping cost and emotional granularity, and predicted explicit emotion reports. These measures all capture the experiential aspect of compassion. Together, these findings suggest that helping cost can influence multiple

aspects of the compassion response, in combination with individual differences that are relevant to each aspect.

Chapter 8

General Discussion

Morality is defined by its dilemmas. One of the most frequent dilemmas that we face is whether to act compassionately toward others if it comes at a cost to ourselves. According to the current paradigm of moral emotions in social psychology, moral emotions help us to resolve this conflict by overriding self-interest to commit us to pro-social behavior (DeSteno, 2009; Frank, 1988; Haidt, 2003; Tooby & Cosmides, 2000). This paradigm gained prominence by challenging assumptions about the primacy of self-interest. Yet a foundational assumption of the current paradigm is that emotions are basic, natural kinds that follow reliably from recurrent social situations and compel specific courses of action. If emotions instead emerge from more basic components like core affect, emotion concepts or appraisals, and motivation (Barrett, 2006; Lazarus, 1991; Lindquist, in press), then self-interest might filter into the very emotions that are constructed in the first place.

Evidence for Strategic Emotion Construction

In this dissertation, I have argued for strategic emotion construction: that people strategically conceptualize core affect into discrete emotions that serve their motivational needs. When confronted with ambiguous affective stimuli—such as a homeless person, for whom one might feel compassion or disgust—people will strategically select the emotion concepts that best prepare for the course of action that they want to take. From

this perspective, we are not passively beholden to the emotional contingencies attached to recurrent social dilemmas. Rather, we actively construct the emotional contingencies ourselves, rigging the game so that we don't have to play.

Across four studies, I provided preliminary evidence for strategic emotion construction. The nature of strategic emotion construction differed depending on whether motivation to avoid compassion was measured or manipulated, and on how compassion was assessed. First, trait motivation to avoid compassion predicted changes in self-reported emotions. People who were high in fear of compassion—who believed that feeling compassion for others would be psychologically exhausting and financially risky—reported more disgust and less compassion in response to affectively ambiguous homeless individuals. The compassion effect emerged in two of the studies, whereas the disgust effect emerged in all four studies. Similar patterns emerged for people who thought that helping would be costly in Study 3, and for people who were disgust sensitive in Study 4. In sum, these findings indicate that chronic motivational orientations predict explicit emotional profiles that are consistent with strategic emotion construction.

At the same time, manipulating lay theories of compassion and donation cost did not shift self-reported emotions. This discrepancy between measured and manipulated motivation to avoid compassion on explicit emotion reports could be due to response correction. People who are chronically motivated to avoid compassion may have no compunction about expressing less compassion and more disgust. But people who lack such motivation may find such emotion reports socially undesirable, even when the motivation to avoid compassion is induced.

To address this possibility, as well as the critique that response biases undermine constructionist accounts (Erdelyi, 1974), Study 4 utilized two implicit measures of compassion. Manipulating donation cost *did* cause changes on the implicit measures, but in interaction with motivation- and process-based individual differences. Imposing high donation cost (v. low cost) led people who were high in fear of compassion to exhibit increased impulsive avoidance of homeless individuals on an approach-avoidance task. When costs were high, fear of compassion was associated with more avoidance, whereas the reverse occurred when costs were low. This finding suggests that fear of compassion interacts with situational cost contingencies to prepare effective action. In short, people who feared compassion constructed more or less compassionate behavioral tendencies depending on the costs afforded by the situation.

Whereas this finding concerns the motivational aspects of compassionate behavior, the second key finding from Study 4 concerns the experience of compassion. Emotional granularity, or the ability to discriminate affective experiences into discrete emotions (Lindquist & Barrett, 2008b), interacted with the helping cost manipulation to shape performance on the affect misattribution procedure. When there is interpretive flexibility to make sense of affective experiences, emotional granularity should facilitate strategic emotion construction. In the high cost condition—but not in the low cost or control conditions—emotional granularity predicted decreased compassion (which in this task, is equivalent to increased disgust) toward ambiguous homeless primes. Thus, depending on situational cost contingencies, people who had greater ability to engage in strategic emotion construction appeared more likely to do so.

These results for implicit measures are important for three reasons. First, they reveal that manipulating motivation to avoid compassion can cause strategic emotion construction, but that the best way to capture such effects may be through implicit measures that bypass social desirability concerns. Study 4 provides the strongest evidence thus far for strategic emotion construction, because it shows how different emotions are constructed from the same affective stimuli depending on the interaction between personality traits and situated contexts.

Second, these results reveal that strategic emotion construction happens only when there is ambiguity to interpret affect in self-serving ways. Fear of compassion did not interact with helping cost to predict changes in impulsive avoidance of unambiguous compassion or disgust primes. Emotional granularity did interact with helping cost to predict changes in AMP compassion judgments for these primes, but in the predicted direction. In the high cost condition, granular participants exhibited sharpened emotional reactions on the AMP, by exhibiting more compassion after compassion primes and more disgust after disgust primes. Consistent with past research on boundary conditions of motivated construal (Balcetis & Dunning, 2006), strategic emotion construction only occurred when there was ambiguity to flexibly interpret core affect.

Third, these findings with implicit measures speak to the non-conscious nature of strategic emotion construction. According to the conceptual act model, the categorization of core affect into a discrete emotion happens non-consciously and rapidly (~200 ms; Barrett, 2006; Lindquist, in press). The approach-avoidance task and AMP both measure emotion without requiring participants to explicitly decide which emotion they are experiencing toward the triggering stimuli. The approach-avoidance task captures

motivational/behavioral tendencies that need not be consciously recognized (Krieglmeyer & Deutsch, 2010), whereas the AMP captures emotional influences that happen counter to intentions and without momentary awareness (Payne et al., 2013). These effects require replication and possible extension with paradigms that definitively preclude conscious emotion selection (such as binocular rivalry, e.g., Anderson et al., 2011). Nevertheless, they provide suggestive evidence that strategic emotion construction can happen non-consciously.

Finally, manipulating lay theories of compassion in Study 2 changed compassion-related behavior: the decision to avoid a donation opportunity. People who had been induced to believe that compassion was costly (v. beneficial) were more likely to avoid this opportunity. Although this effect did not replicate with the cost manipulation in Study 3, it suggests that strategic emotion construction can be captured behaviorally.

Advancing Constructionist Theories of Emotion

By providing preliminary evidence for strategic emotion construction, the current studies advance constructionist theories of emotion. Foremost, they suggest that the emotion construction process can be self-serving. To document discrete emotion construction, past studies have induced core affect and directly primed emotion concepts (Lindquist & Barrett, 2008a). Similarly, older studies with a basis in appraisal theories showed that emotions could be constructed in different ways through directed misattribution manipulations (Batson et al., 1983; Dionsbier et al., 1975). Until now, studies have not tested whether people can spontaneously harness the flexibility of emotion construction to meet their motivational needs. When faced with an ambiguous situation, it might be adaptive to pre-consciously construct an emotion that maximizes

outcomes relative to motivations and situational constraints (Ellsworth, 2013). These findings add motivated selection as a parameter to the dynamic construction of emotions over time. Just as the New Look movement suggested that motivations shape basic perception, strategic emotion construction suggests that motivations can guide us to actively create the emotional landscapes that shape moral experience.

My findings are consistent with both constructionist and appraisal theories, and I did not explicitly test one theory type against another in the current studies. Appraisal models give motivation a pivotal role in emotion generation, with significance for well-being as the key determinant of whether something counts as an emotion, and goal congruence as one of the primary appraisals for what kind of emotion an affective response will become (Lazarus, 1991; Moors, Ellsworth, Scherer, & Fridja, 2013). These models allow for significant, even “infinite” (Scherer, 2009) flexibility in the emotions that can be generated from appraisals about the same stimuli (Ellsworth, 2013; Kuppens, 2013; Lazarus, 1991; Moors, 2010; Scherer, 2009). Appraisal and constructionist theorists would posit different cognitive content that is selectively recruited during the motivated construction process: specific appraisal dimensions or domain-general emotion concepts (Ellsworth, 2013; Lindquist, in press). Study 4 found that emotional granularity—precision in using domain-general concepts to construct emotion—facilitated strategic emotion construction. Further research would need to be done to examine whether specific appraisal dimensions are playing a key causal role.

Another critique is that strategic emotion construction is not distinct from emotion regulation. This critique only carries weight given certain assumptions about the nature of emotion. From a basic emotions perspective, emotion generation by affect programs is

separate from subsequent regulation attempts (Gross & Barrett, 2011). But a constructionist perspective blurs the boundary between emotion generation and regulation. Regulation strategies like re-appraisal can pre-empt emotions from being generated in the first place (Bleichert, Sheppes, Di Tella, Williams, & Gross, 2012; Koole, 2008; Sheppes & Gross, 2011). Moreover, implicit regulation techniques such as affect-biased attention pre-consciously tune attention to affective stimuli that are motivationally relevant (Todd, Cunningham, Anderson, & Thompson, 2012). Distinguishing emotion generation and regulation may have heuristic value in conveying the subjective agency involved (Gross & Barrett, 2011). Consciously striving to alter emotions or their component parts may seem more like “emotion regulation” because it involves greater felt agency. Strategically constructing emotions to fit motivational needs may not break the surface of conscious awareness, and whether we call it “implicit emotion regulation” or something else (such as “self-serving construction”) will likely turn on semantic preference.

Building a Constructionist Moral Psychology

The primary goal of this dissertation has been to revise existing assumptions about emotions that support the current paradigm in moral psychology. Viewing emotions as commitment devices (DeSteno, 2009; Frank, 1988, 2003; Haidt, 2003; Keltner, Haidt, & Shiota, 2006) draws upon premises of basic emotions models: that emotions are reliably triggered by specific social interactions and are hard to stop once activated, thus compelling pro-social behavior much of the time (Ekman, 1992; Ekman & Cordaro, 2011; Haidt, 2001). The commitment device view does not claim total inflexibility of triggering stimuli or inevitable influence of affect programs on behavior

once activated (Ekman & Cordaro, 2011; Frank, 2003). But for the view to hold water, it has to claim that the triggers and behavioral sequences hold *most* of the time, otherwise moral emotions are not effective tools for commitment.

My results challenge the commitment device view by showing that there may be substantial flexibility in “rigging the triggers” (Lazarus, 1991). Self-interest can contaminate emotion conceptualization, erasing moral sentiments before they are activated. This process depends on theoretically relevant motivation (fear of compassion) and ability (emotional granularity). The commitment device view could concede the flexibility point but still maintain that once constructed, moral emotions commit (e.g., Lazarus, 1991; Moors et al., 2013). Yet an emotion once conceptualized may not have inevitable behavioral effects. From a constructionist perspective—as well as some appraisal perspectives (Kuppens, 2013)—we need not expect consistent effects of discrete emotions on judgment and behavior (Lindquist et al., 2013; Moors, 2009). For example, different behavioral effects of a constructed compassion experience might follow depending upon the specific situated emotion concepts that are used to categorize core affect (Condon, Wilson-Mendenhall, & Barrett, in press).

Constructionist theories of emotion are generative for moral psychology because they highlight the variability and malleability of moral emotional experience. On this view, moral emotions can be guided in self-serving ways. Debates over the active/passive nature of moral emotion have a rich philosophical history (Gibbard, 1990; Smith, 1812; Solomon, 1976), and gain renewed relevance in light of recent claims that moral emotions may be strategic public signals (Batson, 2011b; DeScioli & Kurzban, 2013) that can be manipulated for good or ill (Kilduff, Chiaburu, & Menges, 2010). Although

research has examined the time course of compassion (Graziano & Habashi, 2010; Pryor et al., 2004), there has been less traction on *why* and *how* core affect is constructed as compassion rather than related emotions like disgust and distress. Picking up the thread from Dienstbier, Batson, and others in the 1970's, constructionist theories can weave a transactional picture of compassion and other moral emotions that integrates situation, motivation, and process. Just because moral emotions seem passively given and behaviorally compelling—Ekman and Cordaro (2011) even admit that such basic emotions claims are based primarily on introspection—that does not preclude active emotion construction.

There may be other areas in moral psychology where naïve realism about emotional processes blocks scientific progress. For example, moral psychologists have debated whether specific discrete emotions have distinct links with specific classes of moral violation (e.g., disgust with purity violations; Horberg et al., 2009, 2011; Hutcherson & Gross, 2012; Rozin et al., 1999). However, many studies purporting to find distinct links have lacked proper controls for emotion and violation type (see Quigley et al., in press). For instance, many studies (e.g., Horberg et al., 2009; Schnall et al., 2008) that examine whether disgust is uniquely related to purity violations have used sadness as the negative emotion control, when a high-arousal emotion (e.g., anger, fear) would be more appropriate. Just because different emotions and moral violations seem to parse apart as natural kinds with distinct interconnections, does not mean that such intuitions capture the underlying processes that are important for moral psychology theorizing. Dropping the assumption that content equals process may greatly advance understanding of the complex affective dynamics of human morality (Cameron et al., 2013).

Future Directions

Moving forward, additional studies will be needed to validate strategic emotion construction. In the studies presented so far, I have examined how measured and manipulated motivation to avoid compassion predicts changed emotional responses. Future studies will need to reconcile the two effects that I have documented: that 1) trait motivation predicts explicit emotions and 2) manipulated motivation changes implicit emotions. This discrepancy could be due to motivated response correction, in which case social pressure manipulations could be tested and individual difference moderators could be explored (e.g., Payne et al., 2008). Clarifying the implicit/explicit relationship is important for understanding emotion construction more generally (Lane, 2008).

More concretely, future studies should manipulate either motivation or ability to engage in strategic emotion construction. The current studies suggest that fear of compassion may play a powerful role in shaping emotion, yet it was not influenced by manipulations in Studies 2-4. People who are high in fear of compassion are concerned that compassion will lead to emotional exhaustion or financial exploitation. Having people write about a time when feeling compassion for others led them to be exploited might be an effective way to motivate compassion avoidance (Gilbert et al., 2010). Another possibility would be to manipulate worldview, by priming belief in a just world or inducing threat to the social order, to see if that would lead to distinct emotions constructed from the same stimuli.

Another approach would be to hold motivation constant and manipulate process. In Study 4, manipulating the ambiguity of the affective stimuli influenced whether strategic emotion construction emerged. Fear of compassion and emotional granularity

only interacted with high cost to predict reduced compassion for ambiguous primes, where conceptual affordances were less clear. Future studies could manipulate the skills required for strategic emotion construction to take place. In prior work, I have shown that actively instructing people to differentiate emotions using discrete emotion labels—in essence, inducing an emotionally granular mindset—leads to decreased incidental disgust priming of moral judgments, compared to a control condition whether people only focus on valence (Cameron et al., 2013). Manipulating emotional granularity in this way may facilitate strategic emotion construction.

Finally, future studies could explore which components of discrete emotions are being changed by strategic emotion construction. Strategic emotion construction may involve construction of both valence and emotion concepts, as in classic attributional studies (e.g., Schachter & Singer, 1962). Or it could involve the motivated application of different emotion concepts to categorize the same high-arousal, negative core affect (e.g., Lindquist & Barrett, 2008a). Finally, both components might change in tandem through parallel constraint satisfaction (Barrett, 2006; Kirkland & Cunningham, in press; Lindquist, in press). The current studies do not have the data to distinguish these possibilities. If compassion is defined as a positive emotion—which is debatable (Batson, 2011a; Goetz et al., 2010)—then strategically constructing disgust rather than compassion involves a change in core affect from positive to negative valence. One experimental approach would be to cross a high-arousal negative affect induction (present v. absent) with a motivational manipulation (high v. low fear of compassion), and then measure the accessibility of emotion concepts using lexical decision (Kemeny et al., 2012) or Stroop tasks (Batson, 2011a), or attentional biases to disgusting stimuli

using visual search paradigms (Todd et al., 2012). Discrete emotion construction should only be evident when negative affect has been induced, but should take different directions depending on salient motivation to avoid compassion.

Conclusion

According to the dominant paradigm in moral psychology, moral emotions such as compassion and guilt silence self-interested considerations and commit people to pro-social behavior (Frank, 1988; Haidt, 2003). Yet this view of moral emotions as commitment devices presupposes that emotions are basic and uncontaminated by selfish concerns. According to constructionist models of emotion, discrete emotions are the emergent products of core affect and conceptual knowledge about emotions. If such models are correct, then it stands to reason that people might construct their emotional experiences in different ways depending upon whether or not they want to feel those emotions. The current studies are the first to reveal that such strategic emotion construction is possible. In so doing, they reveal that moral experience is variable and strategically malleable. If it looks like a duck and talks like a duck, but you don't want to see a duck, then perhaps you see a rabbit.

Appendix I:

Prime Images in Studies 1-4

Ambiguous Primes:



Unambiguous Compassion Primes:



Unambiguous Disgust Primes



Appendix II:

Emotional Granularity Scenarios in Study 4

- 1) A neighbor asks you to repair a piece of furniture. As the neighbor looks on, you begin hammering the nail but then miss the nail and hit your finger.
- 2) You are running in a race with a friend with whom you have trained for some time. As you near the finish line, you twist your ankle, fall to the ground, and are unable to continue.
- 3) As you drive over a suspension bridge you see a person standing on the other side of the guardrail, looking down at the water.
- 4) Your boss tells you that your work has been unacceptable and needs to be improved.
- 5) You are standing in line at the bank. The person in front of you steps up to the window and begins a very complicated transaction.
- 6) You are walking through the desert with a guide. You ran out of water hours ago. The nearest well is two miles away according to the guide's map.
- 7) Your dentist has told you that you have several cavities and schedules you for a return visit.
- 8) Your doctor told you to avoid fatty foods. A new colleague at work calls to say that she/he is going out for pizza and invites you to go along.
- 9) You and a friend agree to invest money together to begin a new business venture. Several days later you call the friend back only to learn that she/he changed her/his mind.
- 10) You fall in love with someone who is both attractive and intelligent. Although this person is not well off financially, this doesn't matter to you -- your income is adequate. When you begin to discuss marriage, you learn that she/he is actually from an extremely wealthy family. She/he did not want that known for fear that people would only be interested in her/him for her/his money.

Figure 1. Estimated marginal means of emotion intensity by emotion type and measured fear of compassion, Study 1. Error bars represent 1 standard error of the mean.

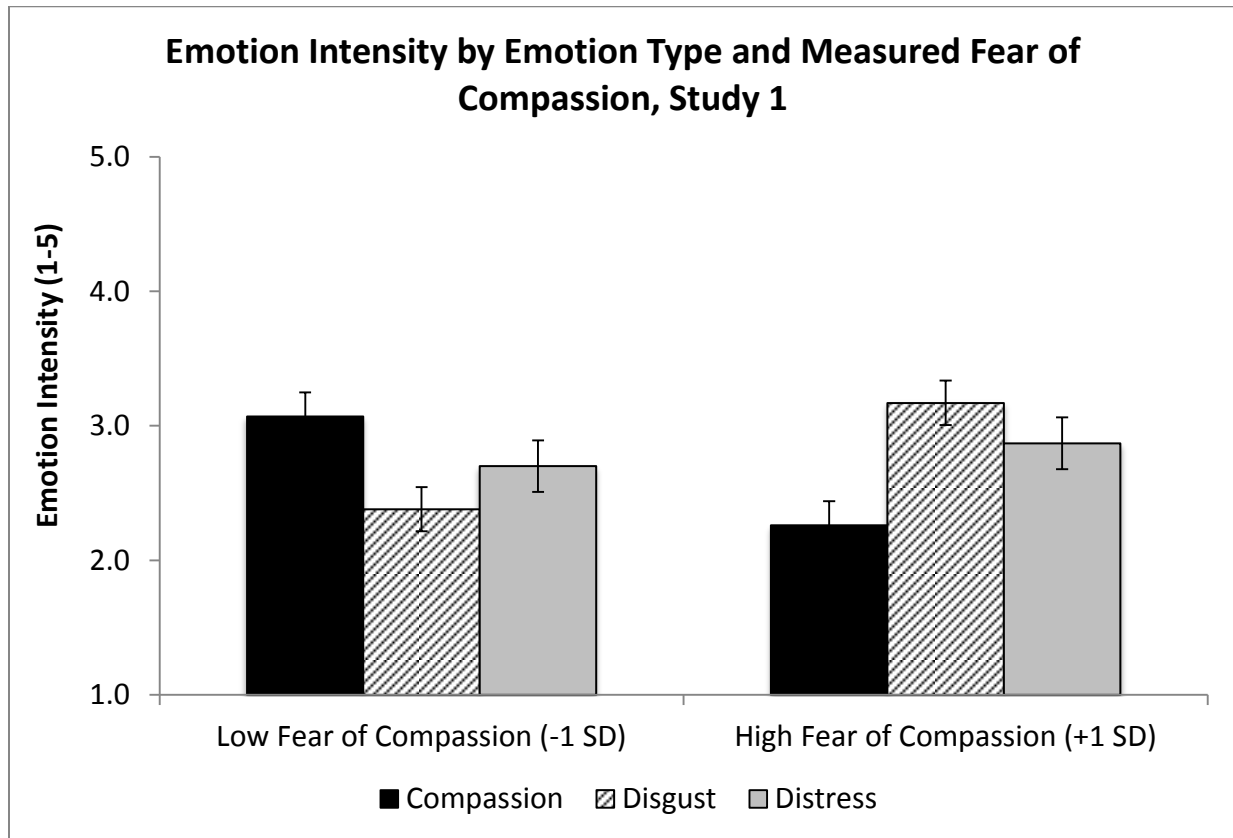


Figure 2. Mean emotion intensity by emotion type and lay theory condition, Study 2. Error bars represent 1 standard error of the mean.

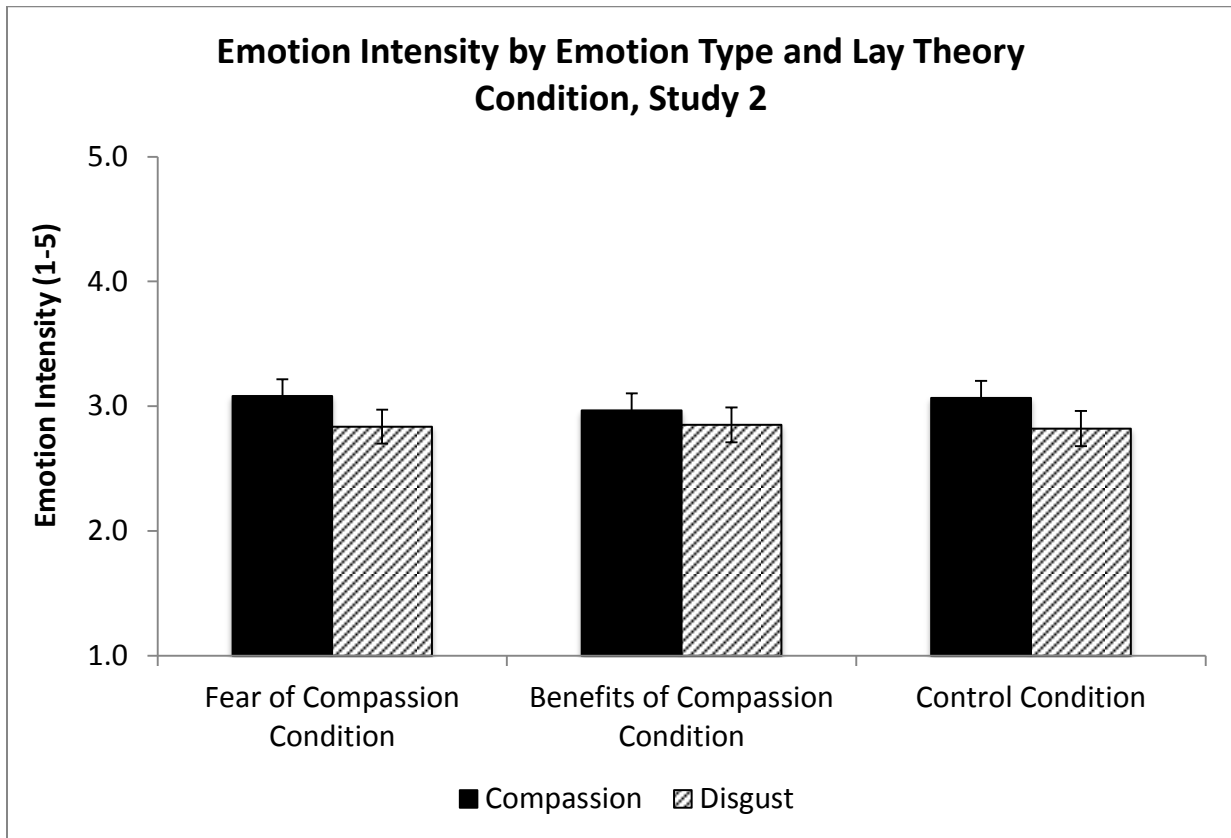


Figure 3. Estimated marginal means of emotion intensity by emotion type and measured fear of compassion, Study 2. Error bars represent 1 standard error of the mean.

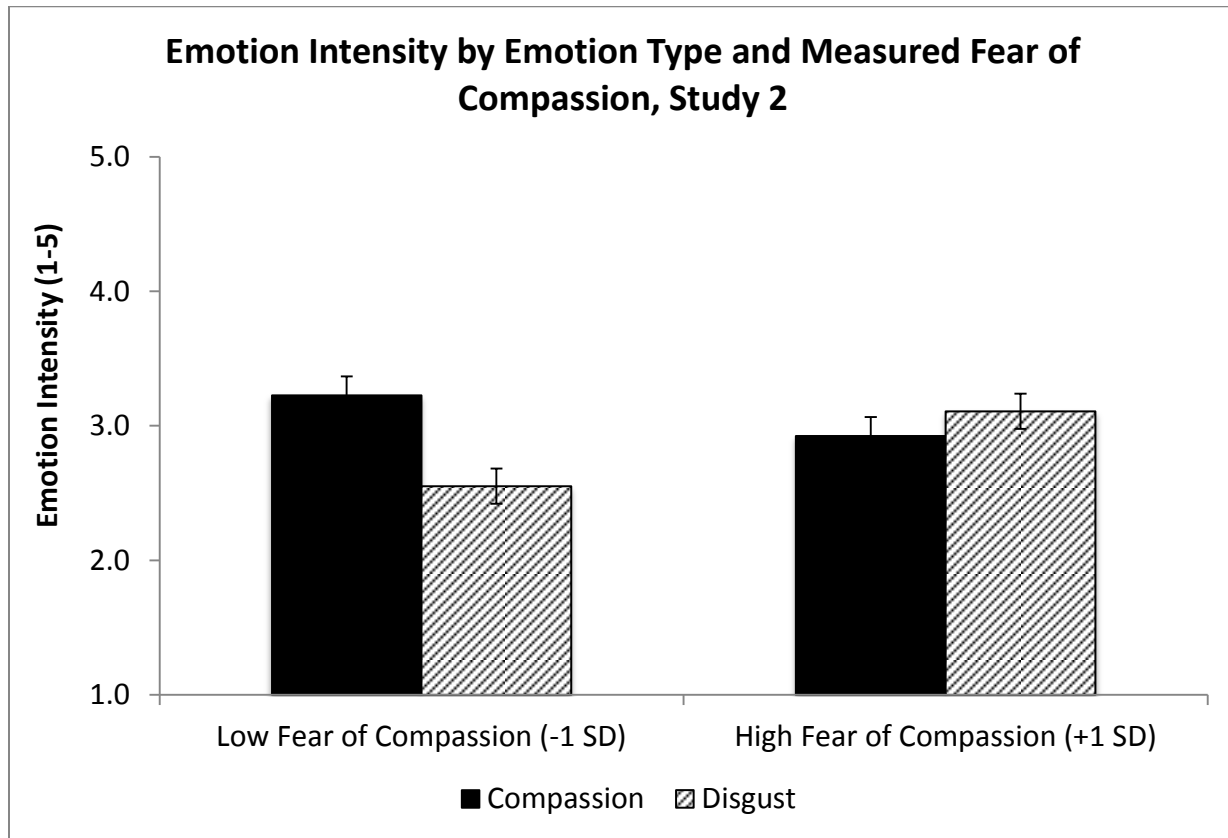


Figure 4. Estimated marginal means of emotion intensity by emotion type and measured benefits of compassion, Study 2. Error bars represent 1 standard error of the mean.

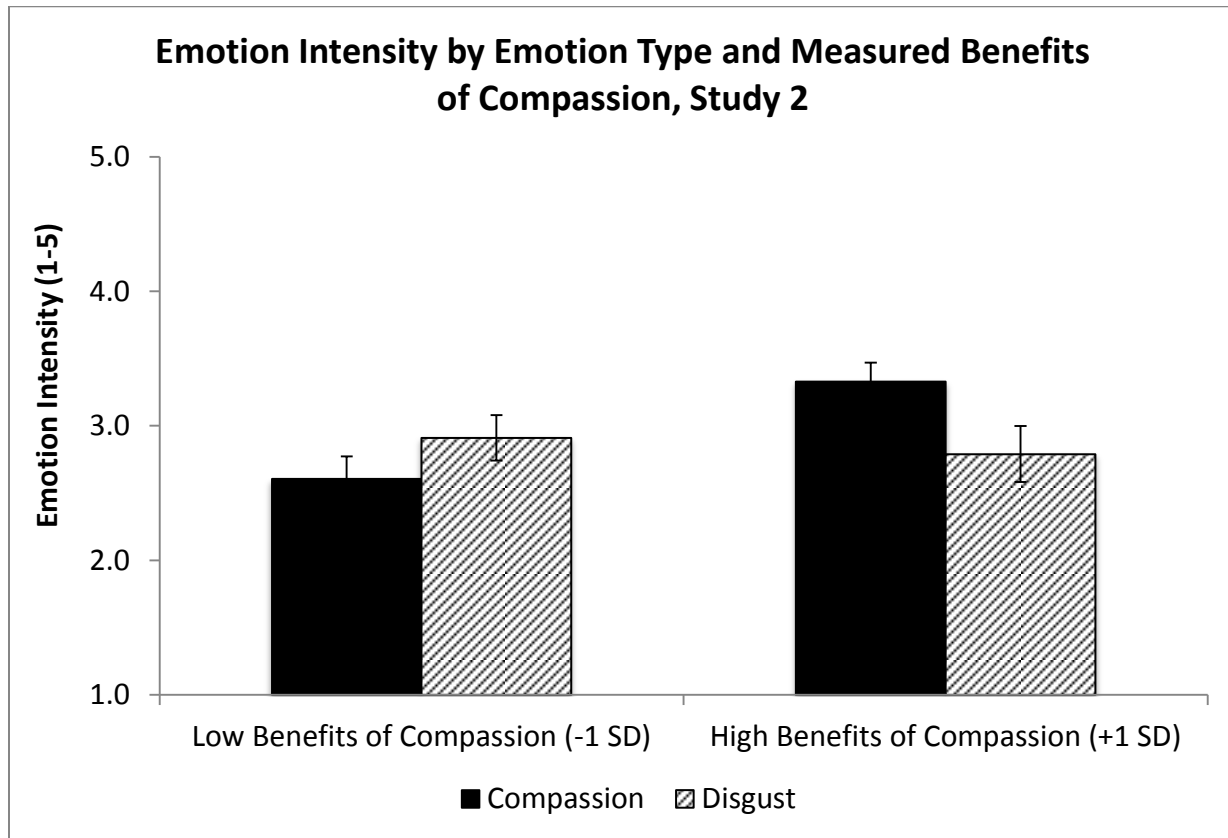


Figure 5. Proportion of participants accessing or avoiding the Habitat for Humanity donation link within each lay theory condition, Study 2.

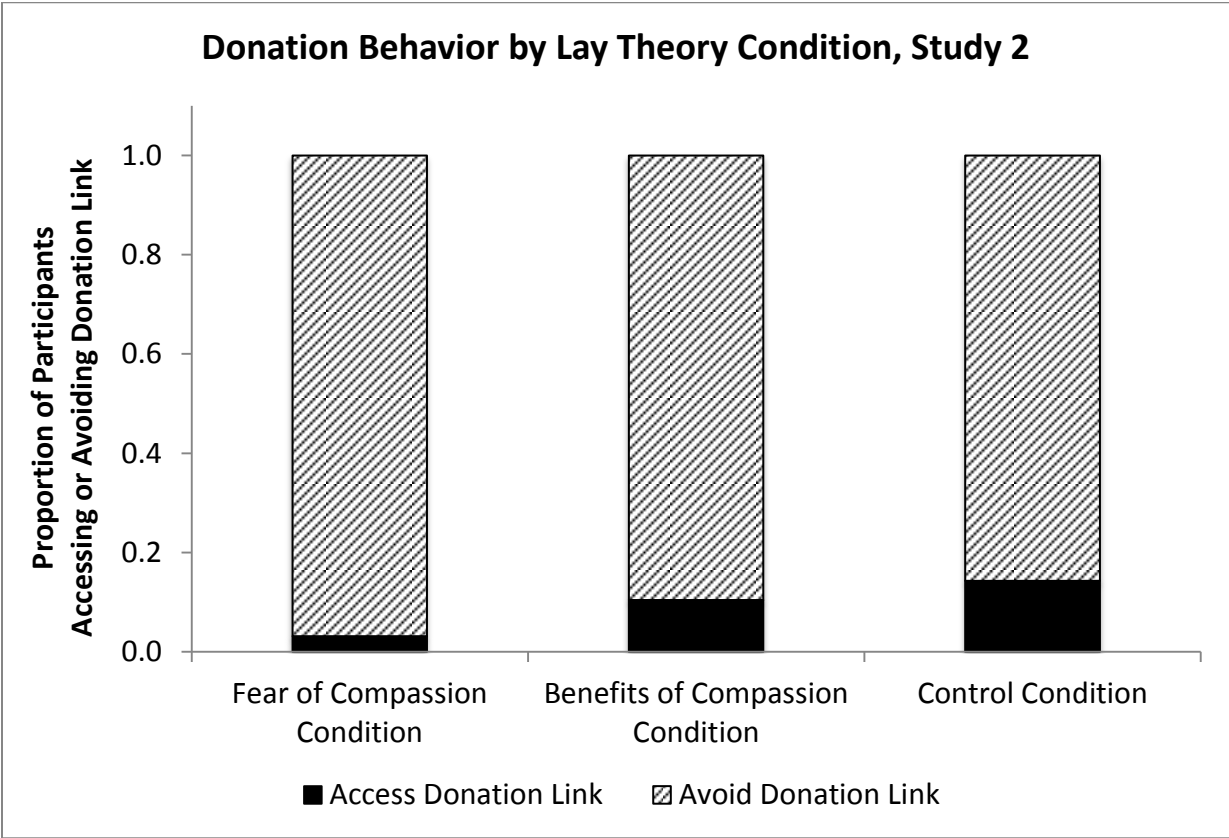


Figure 6. Mean similarity to weak social groups by helping cost condition, Study 3. Error bars represent 1 standard error of the mean.

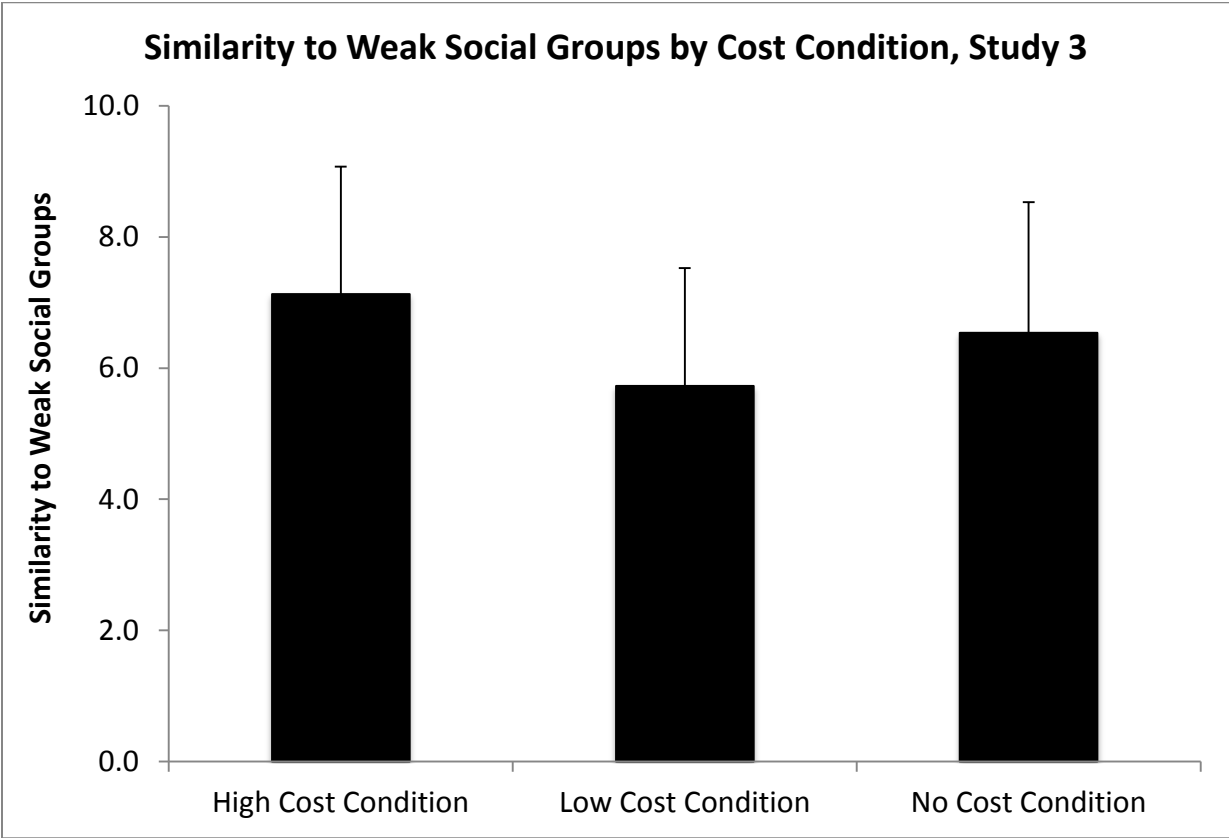


Figure 7. Mean emotion intensity by emotion type and helping cost condition, Study 3. Error bars represent 1 standard error of the mean.

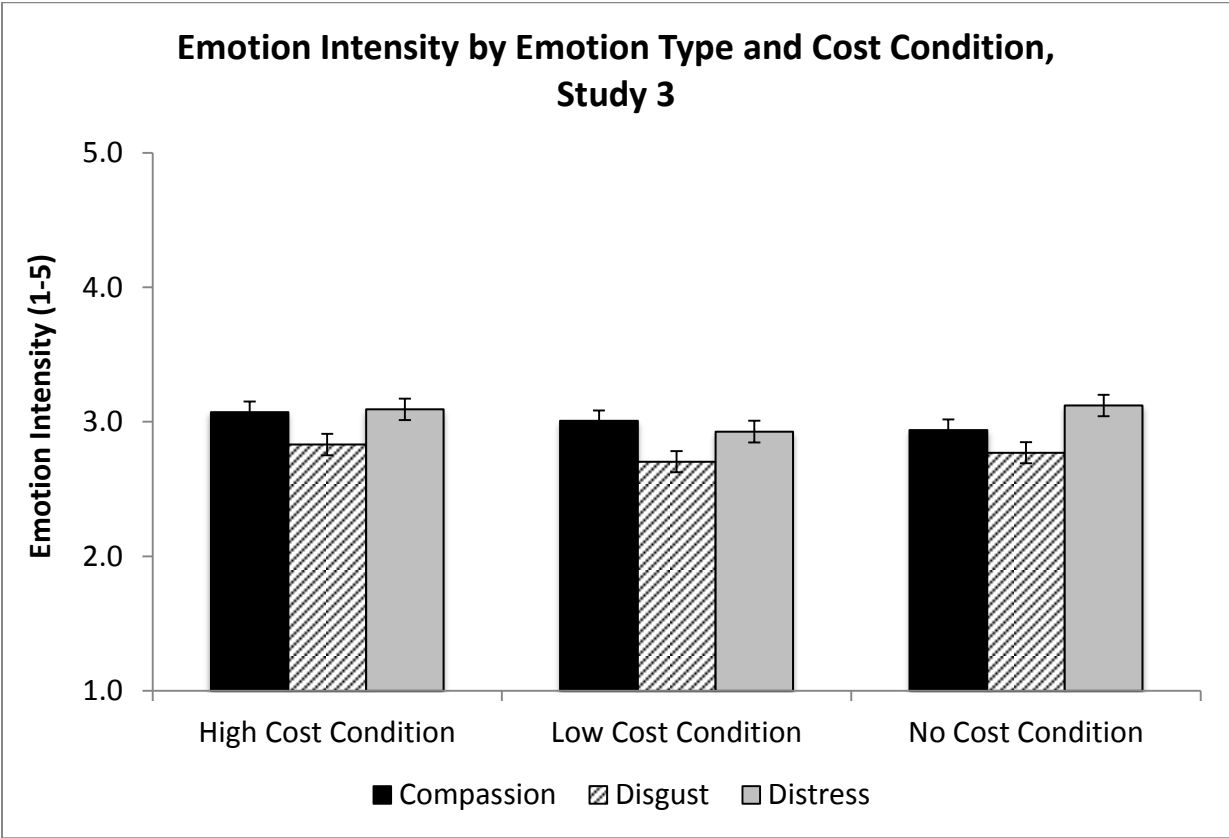


Figure 8. Estimated marginal means of emotion intensity by emotion type and perceived helping cost manipulation check, Study 3. Error bars represent 1 standard error of the mean.

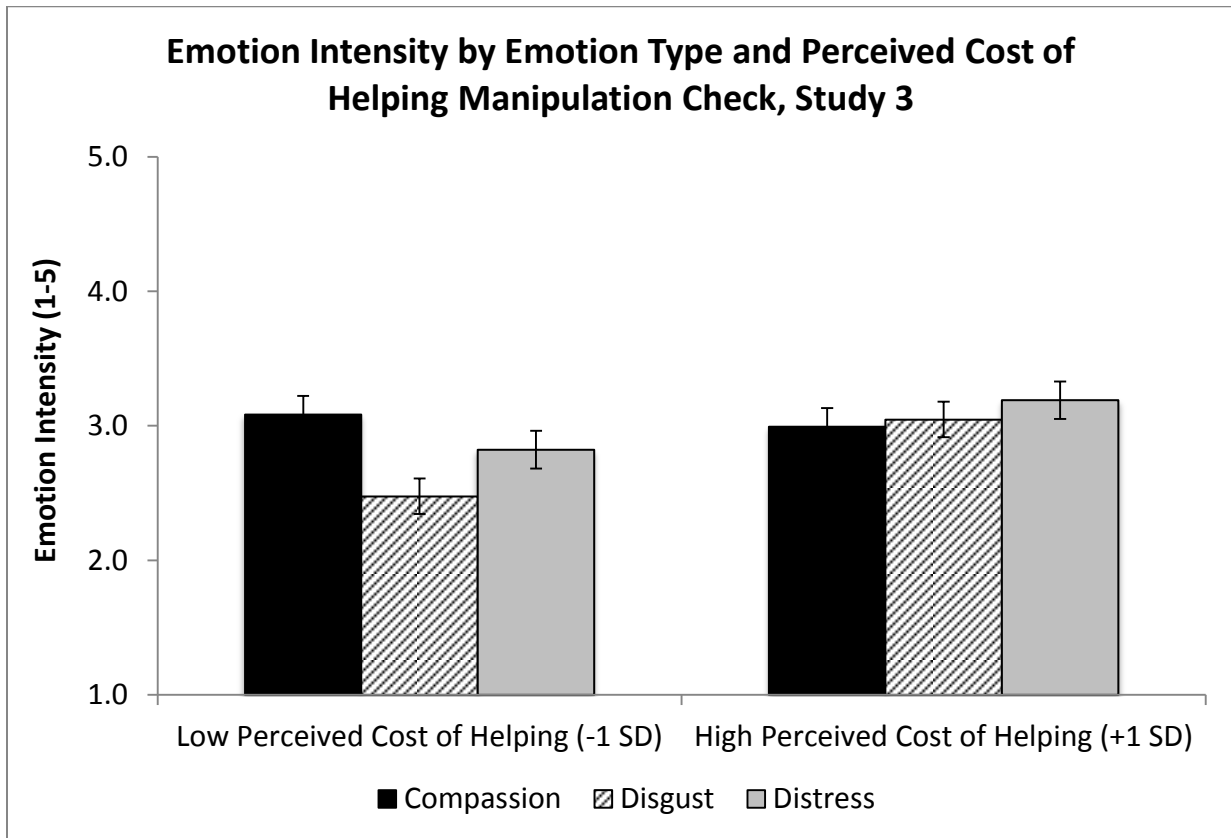


Figure 9. Estimated marginal means of emotion intensity by emotion type and measured fear of compassion, Study 3. Error bars represent 1 standard error of the mean.

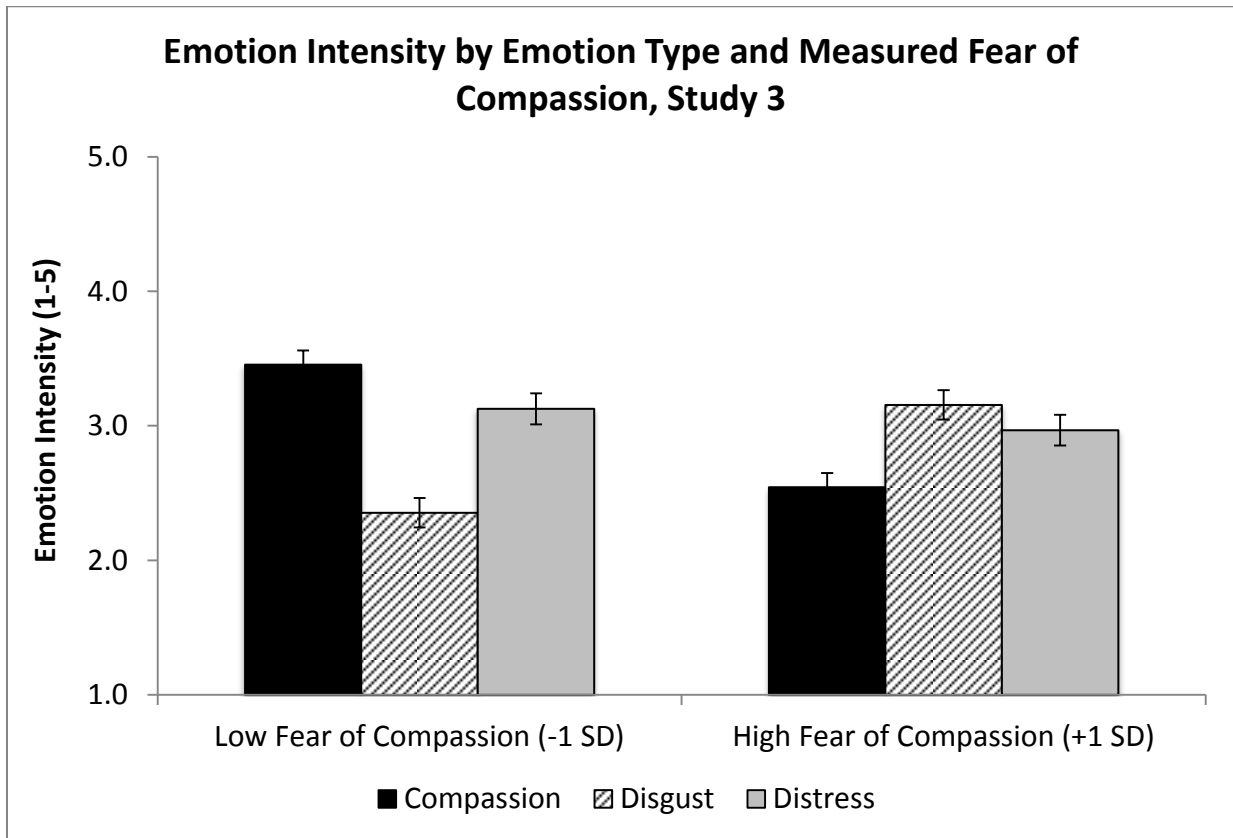


Figure 10. Proportion of participants accessing or avoiding the Habitat for Humanity donation link within each helping cost condition, Study 3.

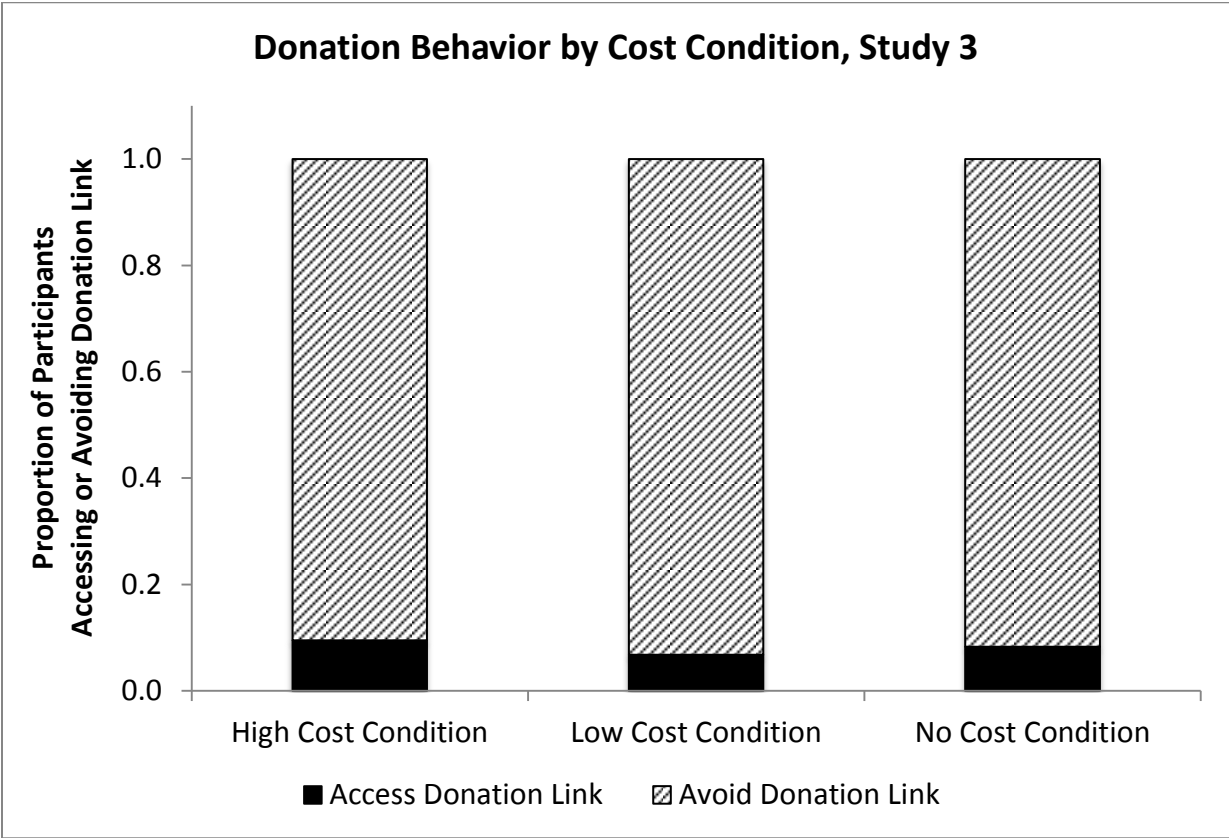


Figure 11. Sample trial of the approach-avoidance manikin task.



Figure 12. Sample trial of the affect misattribution procedure.



Figure 13. Mean impulsive avoidance of target images on the approach-avoidance task, by image type and helping cost condition, Study 4. Positive values indicate more avoidance and negative values indicate more approach. Error bars represent one standard error of the mean.

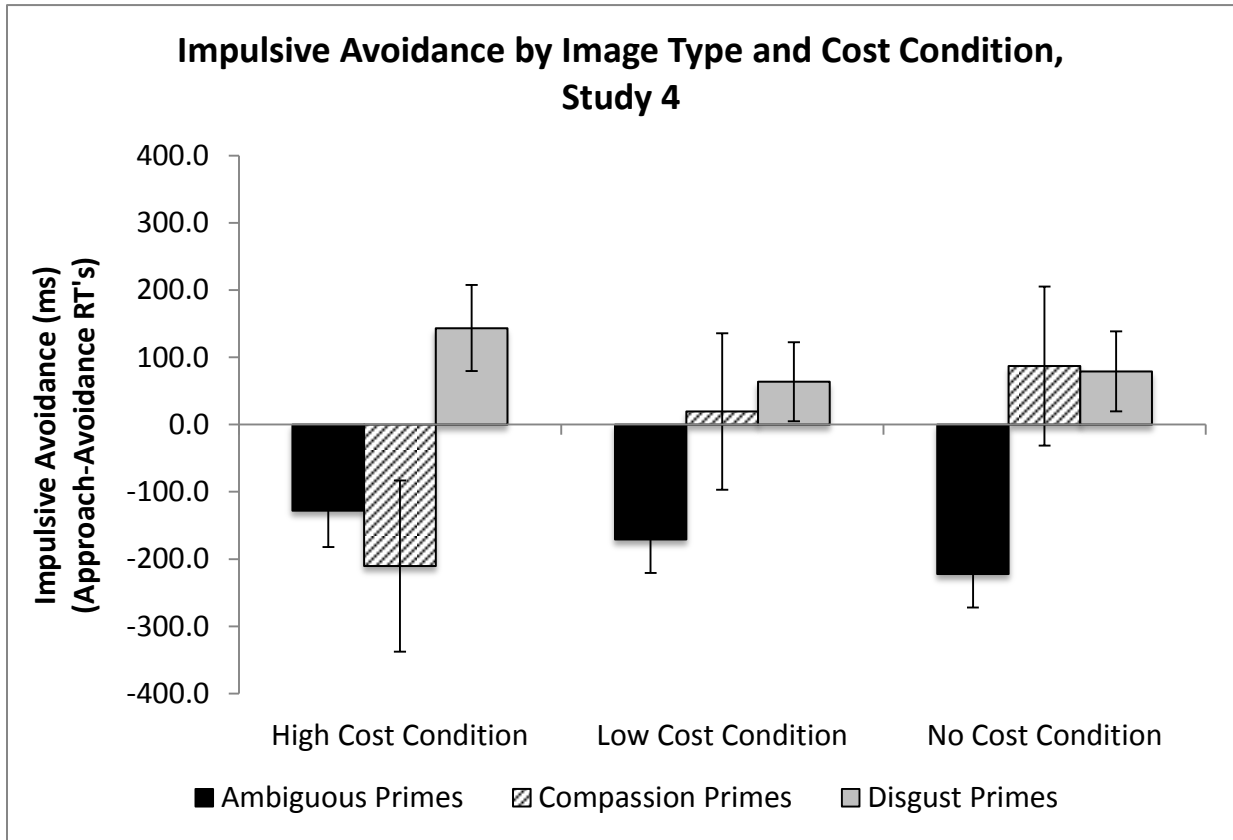


Figure 14. Mean impulsive avoidance of ambiguous homeless person images on the approach-avoidance task, by helping cost condition and measured fear of compassion, Study 4. Positive values indicate more avoidance and negative values indicate more approach. Error bars represent one standard error of the mean.

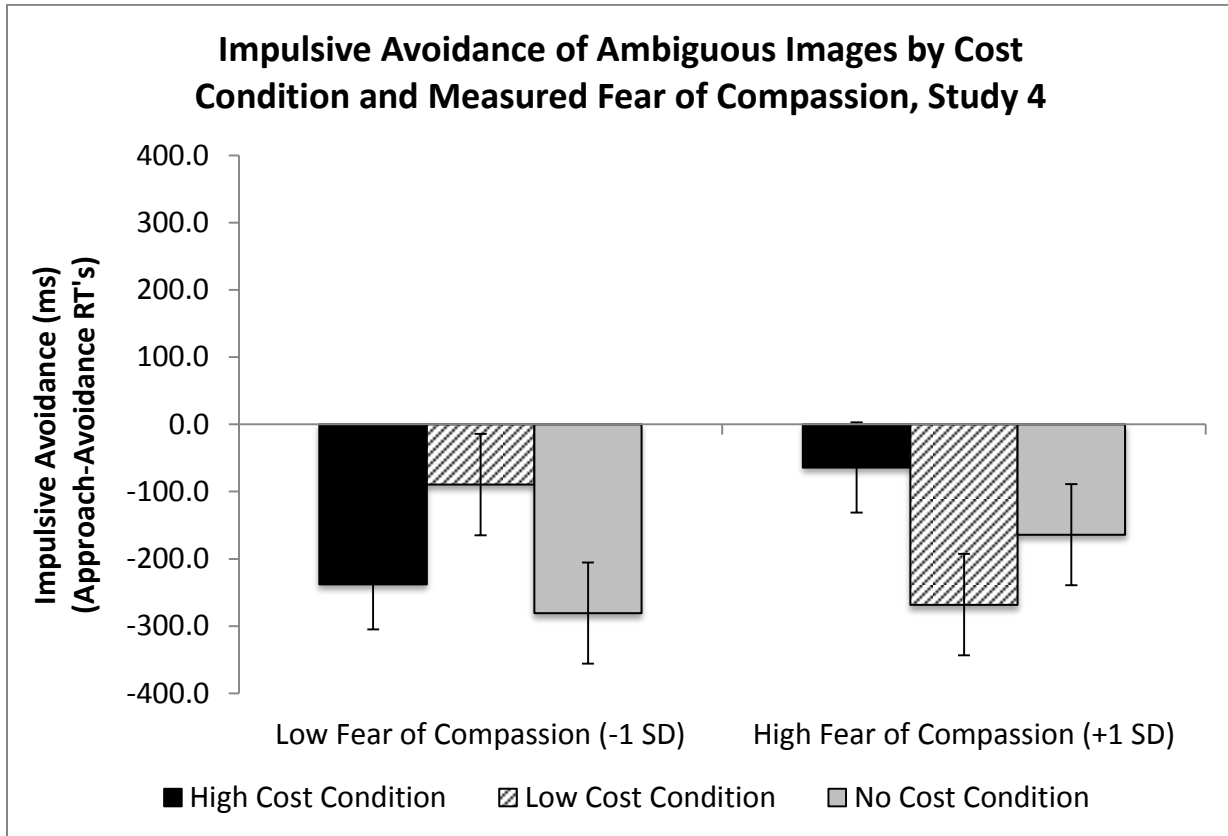


Figure 15. Mean proportion of compassion judgments on AMP by prime type and helping cost condition, Study 4. Values greater than .5 indicate greater proportion of compassion than disgust judgments; values less than .5 indicate greater proportion of disgust than compassion judgments. Error bars represent one standard error of the mean.

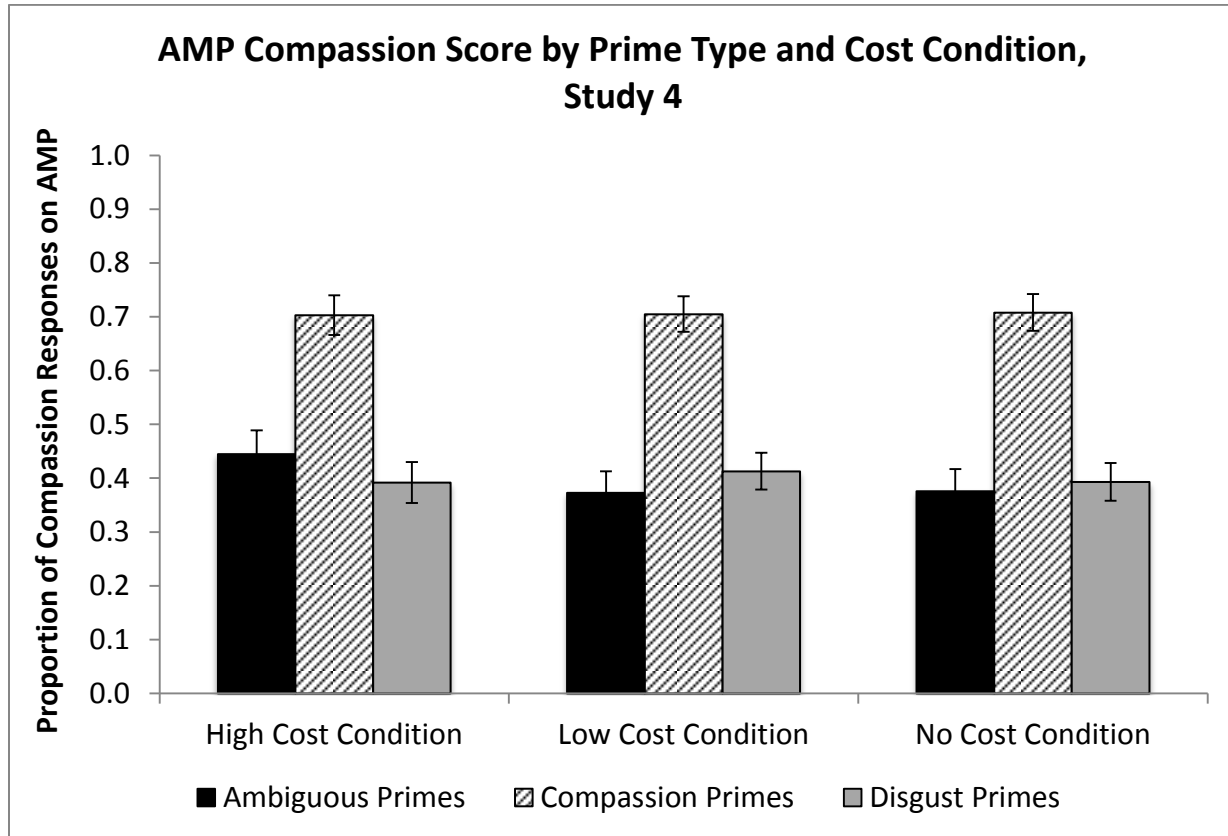


Figure 16. Estimated marginal mean proportions of compassion judgments on AMP by prime type and emotional granularity in the high cost condition, Study 4. Values greater than .5 indicate greater proportion of compassion than disgust judgments; values less than .5 indicate greater proportion of disgust than compassion judgments. Error bars represent one standard error of the mean.

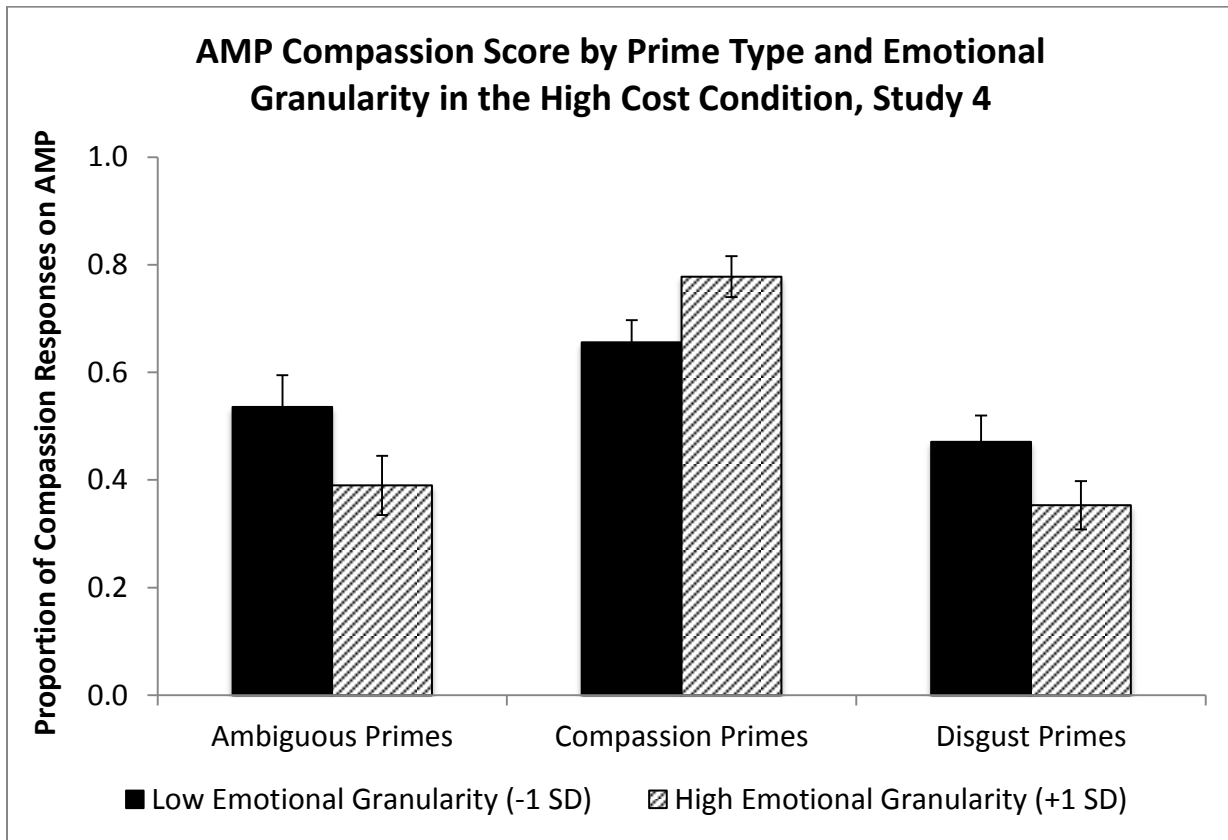


Figure 17. Estimated marginal mean proportions of compassion judgments on AMP after ambiguous primes by helping cost condition and emotional granularity, Study 4. Values greater than .5 indicate greater proportion of compassion than disgust judgments; values less than .5 indicate greater proportion of disgust than compassion judgments. Error bars represent one standard error of the mean.

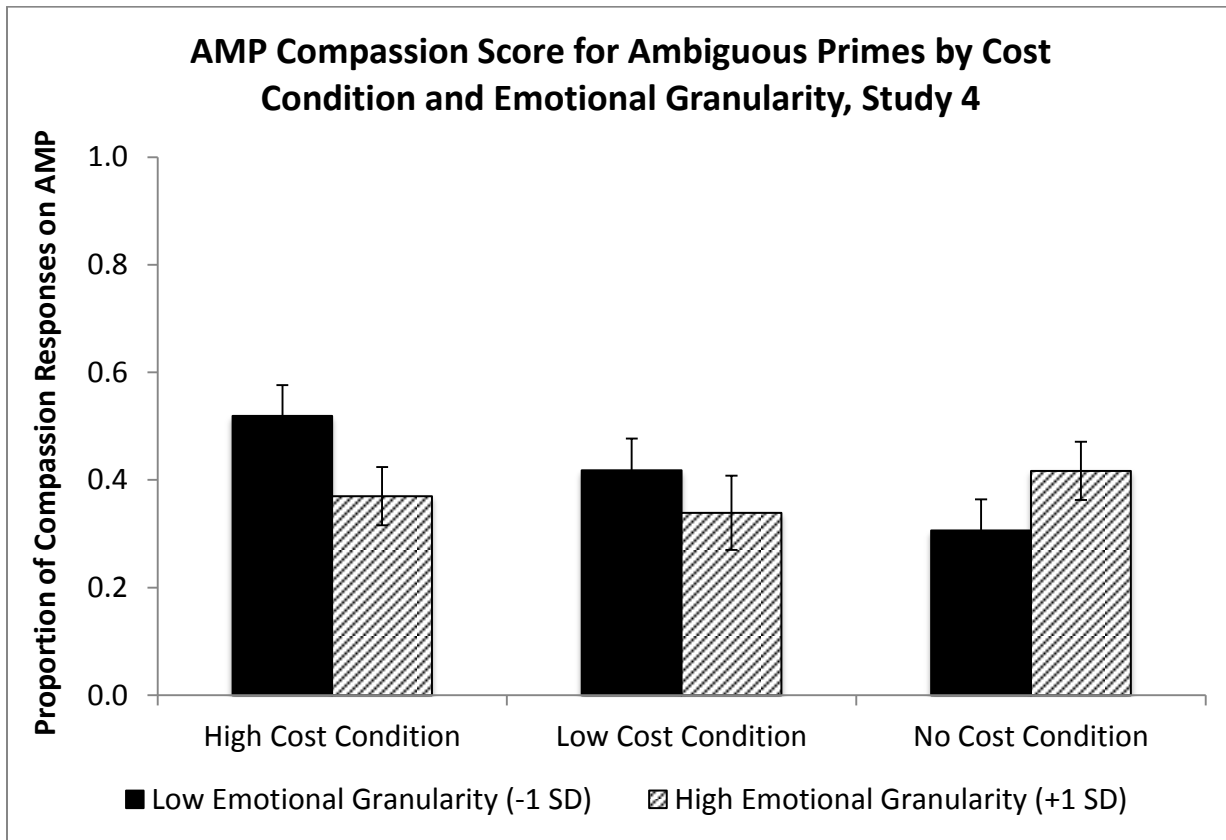


Figure 18. Mean emotion intensity by emotion type and helping cost condition, Study 4. Error bars represent one standard error of the mean.

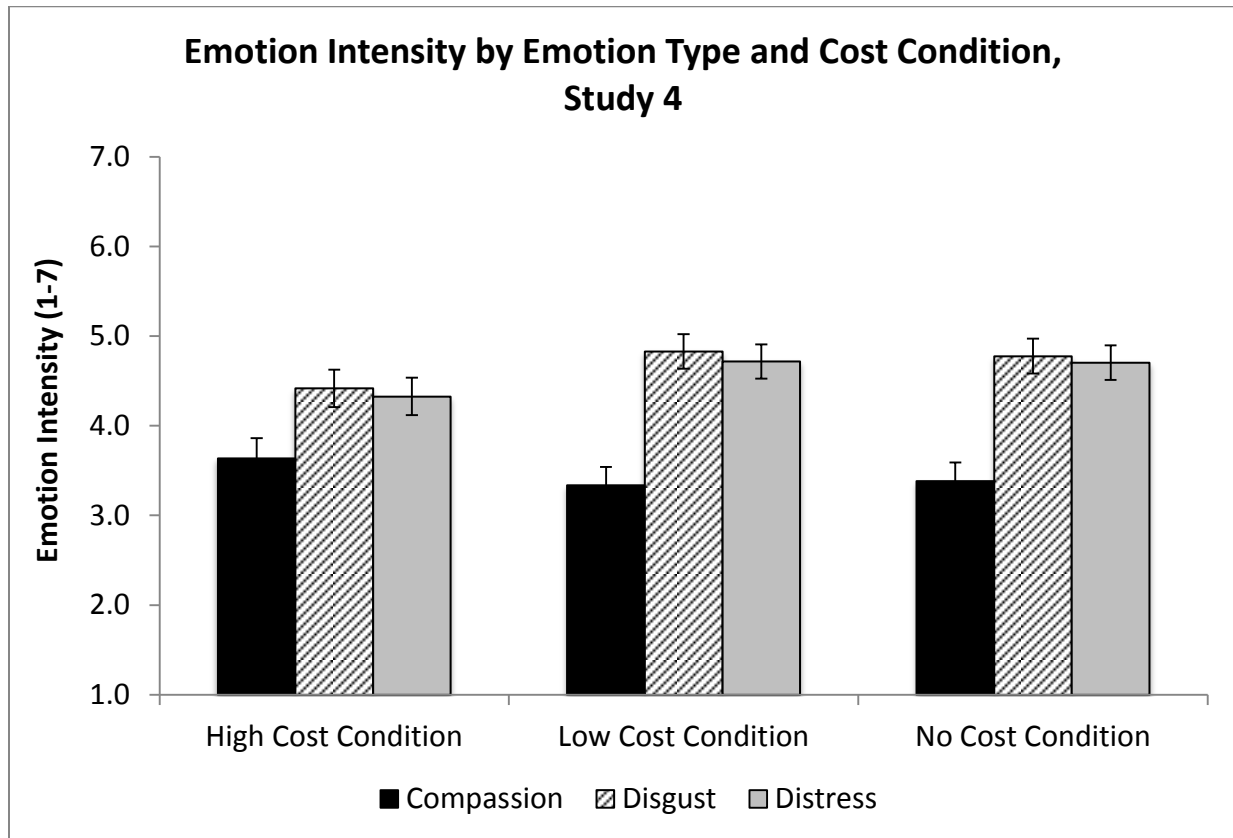
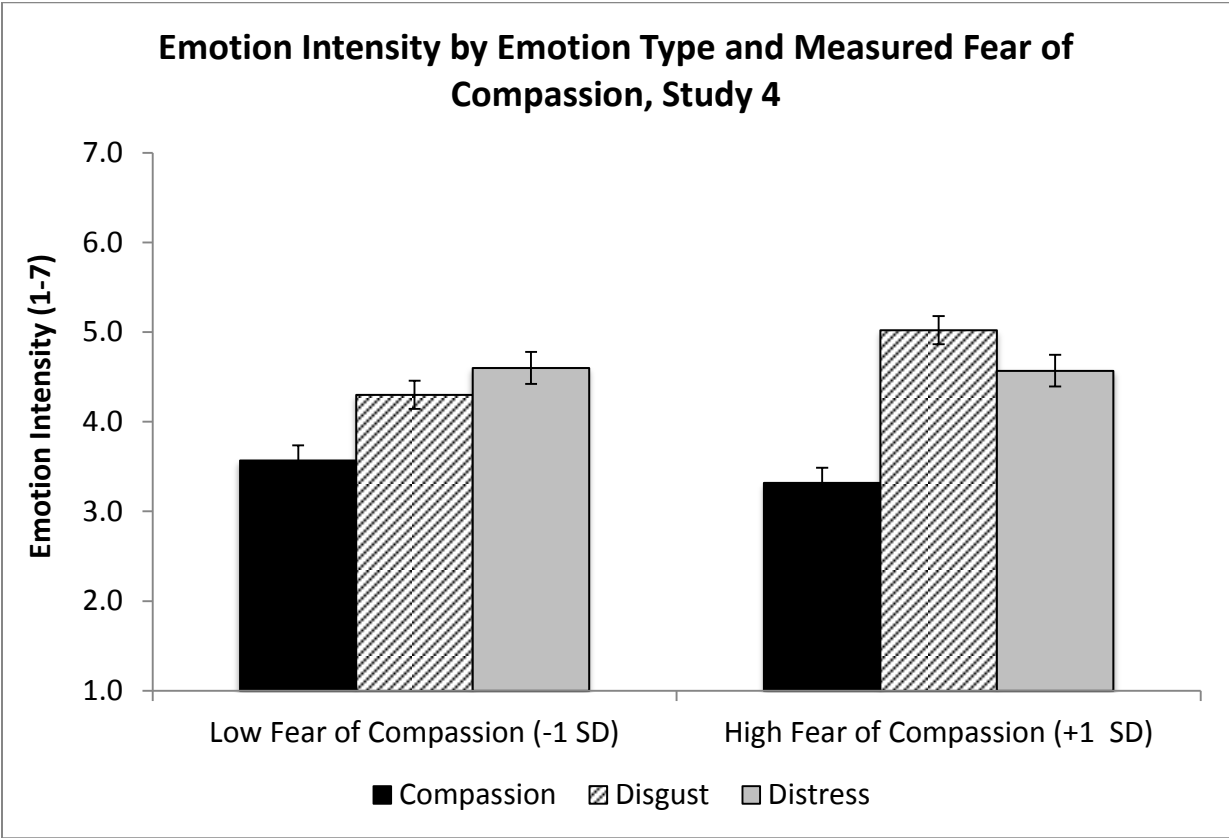


Figure 19. Estimated marginal means of emotion intensity by emotion type and measured fear of compassion, Study 4. Error bars represent 1 standard error of the mean.



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