

PATHWAYS TO ELICITING AID: THE EFFECTS OF
VISUAL REPRESENTATIONS OF HUMAN SUFFERING ON EMPATHY AND
HELP FOR PEOPLE IN NEED

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ABSTRACT

PATHWAYS TO ELICITING AID: THE EFFECTS OF
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HELP FOR PEOPLE IN NEED

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This dissertation investigates how the media representation of a victim of a chronic problem can induce empathy and help for the victim group and whether taking the perspective of the victim is necessary for experiencing empathy for him or her. Three characteristics of media messages examined here are the overt emotional expressions, geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience and facial close-ups used to frame the victim) of a victim. Two experiments were conducted to test the effects of these characteristics on the audience's empathic concern, perspective taking, attitudes toward the interventions that benefit the victim group, and personal helping behavior to the group.

According to the two studies, the actual geographic distance between a suffering victim and the audience has little effects on the outcome variables, whether a picture of

the victim is present or not. Exposure to the picture, however, elicits empathic concern for the victim; the evoked empathic concern, in turn, produces favorable attitudes toward the interventions and helping behavior. In contrast to the positive effect of the picture on empathic concern, seeing the picture reduces perspective taking on the part of the audience.

Furthermore, exposure to a victim's overt emotional expressions increases empathic concern but reduces perspective taking. The positive effect of the emotional expressions on empathic concern is also more evident when the victim is framed in close-ups than when s/he is portrayed from medium perspectives. However, neither the positive effect of the emotional expressions nor the interaction between the emotional expressions and camera perspectives on empathic concern results in favorable attitudes toward the interventions or helping behavior. Facial close-ups of a victim do not heighten the audience's empathic feelings for the victim, nor do the close-ups produce support for the interventions or personal aid. Finally, the strengths and limitations of each study, the theoretical and practical implications of the findings and possible directions for future research are discussed.

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Chapter 1. Pathways to Eliciting Aid for People in Need: An Introduction

Empathy is the only human superpower—it can shrink distance,
cut through social and power hierarchies, transcend differences,
and provoke political and social change.

—Elizabeth Thomas (as cited in Olson, 2008)

Today, many people in the United States and around the world are suffering as a result of various issues that deserve our attention and action. Many of these problems result from uneven distributions of various resources rather than a lack of them on the planet. The disparities threaten not only the survival but also the welfare of human beings. One way to increase personal aid to people in need and stimulate support for government actions that benefit these people is to arouse empathy for them. Empathy induced for one person produces positive attitudes toward the group that shares the person's plight, and prompts actions on behalf of the group (Batson, C. D., Chang, Orr, & Rowland, 2002; Batson, C. D. et al., 1997; Clore & Jeffery, 1972). The positive effects of empathy on attitudes and helping behavior have been found for many targets (e.g., Bagozzi & Moore, 1994; Batson, C. D. et al., 1997; Small & Verrochi, 2009) and even for targets toward whom compassion is hard to elicit (e.g., a convicted murderer or a heroin addict and dealer; Batson, C. D. et al., 2002; Batson, C. D. et al., 1997).

Given its attitudinal and behavioral impact, empathy may facilitate solving a wide range of issues that top the agenda of many organizations and governments around the world (e.g., food shortage, human rights and poverty) by eliciting individual contributions to charitable organizations and support for government actions. Hence, it is important to know what increases empathy for people in need. Thus far, most studies have examined facilitators of empathy in the context of interpersonal communication (see Davis, 1996 for an overview). Scant research, however, has been conducted to examine what enhances empathic experiences in the context of mediated communication, even though most people learn through the media about others with whom they have little interaction.

Understanding the facilitators of empathy in the context of mediated communication is particularly meaningful because via national and international coverage, people, regardless of their physical locations, are able to experience events happening in other places as if they were on the spot (Meyrowitz, 1985). In other words, physical locations of media consumers no longer limit what they perceive and experience. By transcending the communication barriers posed by geographic distances and creating a shared experience for the audience, the electronic media (such as television) makes the world seem smaller and distant others seem closer.

More important for the purpose of this thesis, media coverage of human plight in remote places can help to bridge the geographic distance—sometimes even the cultural distance—between people in need and those who are capable to help, and promote the latter to take actions on half of the former, given that the awareness of the needs of others is a first step toward eliciting aid for them. For instance, despite the fact that most people in western countries know little about Asian cultures and people living in that area, they witnessed the suffering of the victims of the 2004 Asian Tsunami and the 2008 Chinese Earthquake through the media, and provided humanitarian aid to these victims. Hence, it is invaluable to understand how to facilitate empathy for people in need in the context of mediated communication.

Given that the impact of media messages about human suffering varies depending upon exactly how victims are represented (Zillmann & Brosius, 2000), this thesis examines the effects of characteristics of media messages about victims of chronic problems (e.g., poverty, domestic violence, and famine) on empathy for the victims. It attempts to understand in what way the media can arouse empathy for victims of chronic problems because such problems usually draw less attention and call forth less help from people than large-scale natural disasters (e.g., Hurricane Katrina and Haiti Earthquake). To be sure, the ultimate goals of inducing empathy for the victims are to elicit personal helping behavior to the victims (e.g., making donations to

charitable organizations), and to push governments to take actions on behalf of the victims by mobilizing public support for such actions. For this reason, this thesis also studies whether and to what extent empathy evoked for one victim produces private aid for the victim group and/or favorable attitudes toward the interventions that benefit the group.

Many organizations and governments around the world are committed to eliminating chronic threats to the survival and welfare of human beings, but are not able to do so partly due to the lack of public support and/or the shortage of necessary resources. These organizations and governments, therefore, attempt to solicit support and help through the media. However, these efforts have been made with little theoretical guidance. The findings of this thesis can potentially contribute to these efforts by showing how to elicit humanitarian actions on behalf of victims of chronic problems through evoking empathy for the victims represented in the media.

Among the causes of empathy examined by researchers, taking the perspective of a victim has been considered by some to be a prerequisite for experiencing empathy. For example, C. D. Batson (1991) has claimed that taking the perspective of a needy person is a necessary precondition for empathy to occur. By examining whether factors that arouse greater empathy also increase perspective taking, this thesis explores whether and to what extent perspective taking is necessary for experiencing empathy.

The findings can potentially shed light on the role that perspective taking plays in bringing about empathy, one of the focuses of academic debates about empathy.

Taken together, this thesis is driven by the following research questions: 1) in what way the media representation of a victim of a chronic problem can induce empathy for him or her, 2) whether and to what extent the increased empathy can produce personal helping behavior to the victim group and elicit public support for the interventions that benefit the group, and 3) whether perspective taking is necessary for experiencing empathy. To answer these questions, three potential facilitators of empathy for a victim represented in the media are examined, including 1) the overt emotional expressions of the victim; 2) the geographic proximity of the victim, defined as the actual geographic distance between the audience and the assumed location of the victim; and 3) the sensory proximity of the victim (referred to as the extent to which the audience can see and/or hear the victim).

The victim's overt emotional expressions are examined because media messages on human suffering very often contain footage showing the emotional expressions of a victim (Zillmann & Brosius, 2000). Compared to footage of a victim who did not overtly display his or her emotions, footage with the display has higher human-interest value and, therefore, is more likely to make it to news reports. Moreover, graphic and detailed portrayals of emotional expressions of victims are also preferred by producers

of fictional films and dramas. Given that a disproportional amount of media messages about human suffering contain the overt emotional expressions of victims, it raises the question of how the emotional expressions influence empathy, perspective taking, private helping behavior to the victim group, and attitudes toward the interventions that benefit the group.

Beyond the victim's emotional expressions, this thesis also explores the impact of the geographic proximity of a victim on the outcome variables under examination. By watching the globe on the media stage, media consumers are informed of not only human suffering close to home but also the plight of people from remote places. Because of this, it is important to understand whether and to what extent people react to human suffering in distant places in the way that they do to the suffering nearby.

Finally, people with resources to address chronic problems are often least likely to have first-hand encounters with people suffering from the problems because of the geographic distance between the former and the latter. For this reason, it is imperative to understand in what way the media can facilitate redistribution of resources across individuals, regions, and/or countries by eliciting empathy that transcends the actual geographic distance between people in need and those who are capable to offer help. Put differently, it is important to know in what way the media can effectively induce empathy toward distant others. By creating the perception of sensory closeness to

distant victims through direct sensory inputs associated with the victims' suffering (e.g., showing images of the suffering experiences of the victims), the media—electronic media such as television in particular—allow the audience to sense the suffering of the victims as if they were on the spot, no matter where the victims live, which helps to bridge the actual geographic distance between the audience and the victims. Hence, the third and the last factor under examination is the sensory proximity of a victim to the audience.

This thesis involves the effects of the three characteristics of media messages about human suffering (i.e., the overt emotional expressions, geographic proximity and sensory proximity of a victim of a chronic problem) on the outcome variables of interest (i.e., empathy, perspective taking, attitudes toward the interventions that benefit the victim group, and private helping behavior to the group), and it is organized in the following way. *Chapter 2* first defines the concept of empathy and perspective taking for the purposes of this thesis. It then reviews the research into the theory of primitive emotional contagion and the process of transforming shared emotional experience with a victim into empathy. The review points to a potential positive effect of a victim's overt emotional expressions on empathy, but paints an unclear picture about the potential impact of the emotional expressions on perspective taking.

Chapter 2 next introduces the construal level theory which suggests that people should show greater empathy for a nearby victim than for a distant victim. The prediction is also in line with an evolutionary explanation of the origins of empathy.

After this, *Chapter 2* proposes two ways of bringing forth a perception of sensory closeness to a victim among the audience—a picture of the suffering experience of the victim and close-up camera perspectives used to frame the victim. A review of the literature regarding the impact of a visual image of a suffering victim on the audience's emotional reactions, information processing, and cognitive representations of the self and the victim indicates that the image can arouse greater empathy for the victim but, at the same time, reduce the likelihood of the audience taking the perspective of the victim. Moreover, the perception of sensory closeness to the victim, created by the image, may also help to diminish the negative effect on empathy of the actual geographic distance between the victim and the audience.

Given that a victim portrayed from close-up camera perspectives is perceived to be physically closer to the audience than a victim captured from medium perspectives, *Chapter 2* also surveys the research into the effects of interpersonal distance, the size of the screen used to show a person and close-up camera perspectives. The research suggests that capturing a victim from close-ups should elicit greater empathy and more perspective taking than portraying him or her from medium perspectives. Moreover,

close-up camera perspectives should also intensify the expected positive effect of a victim's overt emotional expressions on empathy. Finally, the chapter brings forward the empathy-attitude-action model to explain how induced empathy for a victim can elicit private helping behavior to the victim group and support for the interventions that benefit the group.

Based upon the theories and research reviewed in *Chapter 2*, *Chapter 3* puts forward a series of hypotheses and a research question that are examined by two studies—Study 1 and Study 2. *Chapter 4* elaborates the designs and analytical procedures for these two studies.

Chapter 5 presents the findings from Study 1 which used a survey-experiment to examine how the geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience) of a victim influence empathy, perspective taking, personal helping behavior, and attitudes toward the interventions, on the part of the audience. As predicted, the results showed that seeing the picture induced greater empathy for the victim than not seeing it; the increased empathy, in turn, produced more helping behavior and greater support for the interventions. Also as anticipated, exposure to the picture had a negative effect on perspective taking. The study, however, did not find the expected main effects of the geographic proximity or the interaction effects of the geographic proximity and the picture on the outcome variables.

After *Chapter 5* demonstrates the expected positive effects of visual representations of human suffering on empathy and help for victim groups, *Chapter 6* proceeds to explore what aspects of the representation can further increase empathy and elicit more aid. To be specific, this chapter elaborates upon the findings from study 2, which used a laboratory experiment to test the effects of the overt emotional expressions and sensory proximity (manifested via close-up camera perspectives used to portray a victim) of a victim on an audience's psychophysiological responses, empathy, perspective taking, attitudes toward the interventions, and intentions to offer personal aid to the victim group. As predicted, the study found a positive effect of the victim's overt emotional expressions (i.e., crying in the case of this study) on participants' brow activity (an indicator of their imitating the negative emotional expressions of the victim). Also as anticipated, the study demonstrated a positive effect of close-up camera perspectives on participants' emotional arousal. Besides this, the results supported the expected positive effect of the victim's emotional expressions and the predicted interaction between the emotional expressions and camera perspectives on empathy. Moreover, the analyses showed a negative effect of the victim's emotional expressions on perspective taking. The study, however, did not find the predicted effects of the emotional expressions or camera perspectives on attitudes toward the interventions or helping intentions.

Chapter 7, the final chapter of this thesis, begins with a summary of the findings of the two studies, which is followed by a discussion of the strengths and limitations of the studies. After this, the chapter reflects on the theoretical and practical implications of the findings, and points out the possible directions for future research.

Chapter 2. Facilitators of Empathy and Their Attitudinal and Behavioral Impact

This chapter begins with defining the concepts of empathy and perspective taking, which is followed by a review of the theories and research that shed light on the potential impact of the overt emotional expressions, geographic proximity, and sensory proximity of a victim on empathy and perspective taking. It then introduces the empathy-attitude-action model proposed by Batson and his colleagues (Batson, C. D. et al., 2002), which explains how empathy evoked for one victim (e.g., an abused woman) can elicit personal helping behavior to the victim group as a whole (e.g., abused women) and support for the interventions that benefit the group.

Empathy

Empathy has been widely examined both as a personality trait and as a short-term experience. Empathy as a trait refers to individual differences in the tendency to be empathic, as a result of nature, socialization or development (e.g., Davis, 1980; Hoffman, 1984). When facing the same situation, individuals with a greater empathic tendency will empathize more with the target than those with a low empathic tendency. Empathy as an experience, on the other hand, refers to individual experiences in response to a particular situation (e.g., Batson, C. D. & Coke, 1981; Batson, C. D. et al.,

2002; Zillmann, 2006). It reflects the variation of empathic experiences across situations that is independent of individual differences in empathy as a personality trait.

In other words, though individuals with a higher capability for empathy tend to experience greater empathy on average than those with a low capability across situations, some circumstances tend to induce greater empathy across individuals.

Given that this thesis focuses on potential situational facilitators of empathic experiences that transcend individual differences in empathic tendencies, the term empathy is used to refer to empathic experiences in the sections that follow, unless specified otherwise.

Thus far, researchers have not reached agreement on whether empathy is mainly an affective experience or an affective-cognitive experience (e.g., Davis, 1996; Duan & Hill, 1996). To further complicate the situation, those who consider empathy as an affective experience have defined the experience differently, even though their definitions may or may not overlap with each other. For example, empathy has been used to refer to the emotional state of an observer that matches the emotional state of a target (e.g., Davis, 1996; Omdahl, 1995). By this definition, observers experience empathy only if they share the emotional state of the target. They do not experience empathy if, for instance, they feel concern or sorry for a sad target.

Moreover, empathy has been defined as emotional reactions that are consistent more with the situation of the target than with the situation of the observer (e.g., Hoffman, 1987) or as the experience of “feelings with, or feeling for, the other individuals” (Zillmann, 2006, p. 156). By these definitions, empathic experiences include not only sharing the emotional state of the target but also reactive affective responses to the target’s emotions and situation (e.g., feeling sorry and concern for the target).

Finally, empathy has also been used to refer to “an other-oriented emotional response congruent with the perceived welfare of another person” (Batson, C. D. et al., 2002, p. 1656). The disagreement on the definition of empathy among scholars can be attributed to the unclear nature of empathy (Duan & Hill, 1996). In other words, it is unclear whether empathic experiences are primarily affective, or both affective and cognitive, and what encompasses the affective component of the experiences.

For the purpose of this thesis, I consider empathy as a situation-specific affective experience, and define it as other-oriented emotional responses that are in line with the perceived welfare of another person in distress (Batson, C. D., Batson, J. G., et al., 1995; Batson, C. D. et al., 2002); this kind of emotional reactions has also been dubbed “empathic concern.” To differentiate the definition of empathy used in this thesis from the ones mentioned earlier, the term “empathic concern” instead of

“empathy” is used in the rest of this thesis. According to the definition of empathic concern—that is, other-oriented emotional responses that are consistent with the perceived welfare of another person in distress—it is a kind of reactive affective responses that consist of observers’ emotional reactions to a target’s emotions and situation (Davis, 1996).

This thesis focuses on empathic concern because it is believed to be one of the key pathways to truly altruistic motivation (Batson, C. D., 1991; Stocks, Lishner, & Decker, 2009). Observers who experience empathic concern are compelled to help the target not because doing so can reduce the undesirable emotional state they experience (characterized, for example, by distress and anxiety) in face of the target, but because helping the target can reduce his or her need. This distinction is important because, if the goal is to reduce or avoid the undesirable emotional state of their own, then observers can take actions other than helping the target (e.g., turning away from the target or escaping from the situation) to achieve it. In fact, for media consumers, turning away from a suffering victim should be particularly easier than helping him or her as they can quickly turn a page or flip to another channel. Observers experiencing empathic concern, on the other hand, tend to offer help to the target, regardless of how easy it is to escape from the situation (Batson, C. D., 1991; Batson, C. D., Duncan, Ackerman, Buckley, & Birch, 1981; Toi & Batson, C. D., 1982). Given that this thesis

attempts to understand in what way the media representation of a victim of a chronic problem can elicit aid for the victim group via inducing empathy for the victim, it is important to study how to evoke empathic concern—rather than other kinds of emotional reactions—among the audience.

Sympathy is easily confused with empathic concern. Sympathy is the feeling of pity and compassion for the sorrow of others (Davis, 1996). Empathic concern, on the other hand, refers to any other-oriented emotional reactions that are consistent with the perceived welfare of others in distress, which include feelings other than pity and compassion (e.g., sorry and concern). In this sense, empathic concern is a broader concept than sympathy.

In sum, the term of empathy has been widely used to refer to two different constructs, a personality trait and a situation-specific experience. The latter construct is the focus of this thesis. Although researchers have not reached agreement on the nature and definition of one's empathic experience, for the purpose of this thesis, I define the experience as other-oriented emotional responses that are congruent with the perceived welfare of others in distress, a kind of emotional reactions also known as “empathic concern.”

Perspective Taking

Perspective taking refers to the attempts by observers to understand a target's feelings and situation through imagining his or her perspective, which is believed to be a deliberate process that involves the suppression of one's own perspective and the adoption of the target's perspective (Davis, 1996). To take the perspective of a target, one needs to have the ability and the repertoire of experience necessary for viewing the situation from the target's perspective (Smither, 1977).

Perspective taking has been considered by Batson and his colleagues as a necessary cause of empathic concern (Batson, C. D., 1991). Although studies have shown a robust link between perspective taking and empathic concern, most of the studies induced empathic concern via instructing subjects to take the perspective of a target (Batson, C. D. et al., 2002; Batson, C. D. et al., 1997; Batson, C. D., Turk, Shaw, & Klein, 1995; but also see Gruen & Mendelsohn, 1986; Houston, 1990 for exceptions). Hence, it is unclear whether other facilitators of empathic concern can also lead to perspective taking. By examining the effects of facilitators of empathic concern on perspective taking, this thesis is able to explore whether perspective taking is necessary for experiencing empathic concern. Three facilitators of empathic concern examined in the following sections are the overt emotional expressions, geographic proximity, and sensory proximity of a victim of a chronic problem portrayed in the media.

Overt Emotional Expressions

The overt emotional expressions of a victim (e.g., tears of an abused woman) should induce greater empathic concern among the audience, mainly because they allow viewers to experience the feelings of the victim. Sharing the emotional state of the victim, in turn, evokes empathic concern for the victim. According to the theory of primitive emotional contagion, one tends to automatically and unconsciously mimic the emotional expressions—including bodily, facial, and/or vocal expressions (e.g., Hatfield, Cacioppo, & Rapson, 1994; Vaughan & Lanzetta, 1980; Zillmann 2006)—of others, and this mimicry causes people to spontaneously experience the emotions of others (Hatfield et al., 1994).

In line with the theory, studies have shown that witnessing certain affective expressions of another person can automatically bring forth similar expressions in observers. For example, human infants have shown spontaneous mimicry of facial movements in the first few days of their life (Field, Woodson, Cohen, Garcia, & Greenberg, 1982; Meltzoff & Moore, 1977). Imitating others' emotional expressions has also been found among adults. An increase in corrugator supercilii (brow) activity—that normally occurs while one experiences negative emotions (e.g., fear, anger and sadness)—is detected as a result of observation of angry or fearful faces of others (Duclos et al., 1989; Lundqvist, 1995; McHugo, Lanzetta, Sullivan, Masters, &

Englis, 1985). More lateral frontalis activity—associated with one’s experience of surprise—is observed as a response to surprised faces, and an increase of zygomatic (cheek) activity—associated with one’s positive affective experiences (e.g., happiness)—to happy faces. Moreover, one’s facial expressions can also be influenced by vocal affective expressions. For example, exposure to verbal expressions of anger (Hietanen, Surakka, & Linnankoski, 1998) or radio advertisements with a negative emotional tone (Bolls, Lang, & Potter, 2001) increases brow activity among listeners. Listening to radio advertisements with a positive emotional tone, on the other hand, leads to greater cheek activity (Bolls et al., 2001).

More importantly, such changes in facial muscle activity can influence observers’ emotional states, and the strength of the activity corresponds with the intensity of subjective emotional experiences of the observers (Adelmann & Zajonc, 1989; Matsumoto, 1987). Consistent with this idea, studies have shown that deliberately stimulating facial expressions that signal specific emotions (e.g., Strack, Martin, & Stepper, 1988; Zajonc, Murphy, & Inglehart, 1989), or simply exaggerating or suppressing naturally occurring facial expressions (Adelmann & Zajonc, 1989; Hatfield, Cacioppo, & Rapson, 1992) changes one’s emotional experiences. In one study, subjects were asked to hold a pen with their non-dominant hand, with their teeth (stimulating a smile) or with their lips (stimulating a frown) while reading several

cartoons and evaluating them in terms of how funny they were (Strack et al., 1988).

The results showed that participants who held the pen with their teeth gave the highest overall funniness ratings, those holding the pen with their lips gave the lowest ratings, and those holding the pen with their non-dominant hand fell between the two extremes. When participants were asked to read aloud stories with many ü sounds (stimulating a frown) and stories without such sounds, the stories with the ü sounds were rated more negatively than the stories without such sounds, even though listeners did not rate the stories differently (Zajonc et al., 1989).

In testing how exaggerating and inhibiting naturally occurring facial expressions influence people's emotional experiences, subjects were instructed to deceive observers about their actual feelings by either exaggerating or muting their facial expressions while exposed to amusing movies or given painful electronic shocks (e.g., Lanzetta, Cartwright-Smith, & Kleck, 1976; McCaul, Holmes, & Solomon, 1982; Zuckerman, Klorman, Larrance, & Spiegel, 1981). Most studies using this technique found that subjects felt the films were funnier or the shocks were more painful when they exaggerated their expressions than when they muted them.

Moreover, modulating naturally occurring facial expressions can also affect one's physiological responses. Compared to baseline measures of physiological arousal (indicated by subjects' skin conductance levels), muting facial expressions in response

to the films or the shocks reduced the arousal levels whereas exaggerating the expressions increased the arousal levels (Lanzetta et al., 1976; Zuckerman et al., 1981). Given that higher levels of arousal signify greater intensity of emotional reactions (Schachter & Singer, 1962), the findings with respect to physiological arousal provide further support for the notion that the strength of facial muscle movements corresponds with the intensity of emotional experiences. Hence, changes in facial expressions can not only initiate an emotional state but also modify the intensity of an existing emotional state.

Thus far, research reviewed in this section suggests that observers tend to mimic the emotional expressions of a target and that mimicry in turn produces a similar emotional state in the observers. Indeed, studies have shown that people tend to feel anxious when viewing the face of an anxious person (Gump & Kulik, 1997) and that they experience happiness in the company of a happy person (Howard & Gengler, 2001). The emotional convergence usually occurs automatically and unconsciously (Hatfield et al., 1994). In other words, experiencing others' feelings by responding to their emotional expressions does not depend upon an inferential process and, therefore, can occur outside of awareness. For example, people can be easily affected by another person's emotions without knowing that their mood or feelings have changed because of that person (Neumann & Strack, 2000; Small & Verrochi, 2009). Moreover,

responding to others' emotional expressions can occur even when exposure to the expressions is below the conscious level. For example, subjects reacted with distinct facial muscle activity when they received 30-ms exposures to happy and angry faces (Dimberg, Thunberg, & Elmehed, 2000). Finally, one can also automatically experience the emotions of those with whom s/he does not agree. For instance, even though subjects' self-reported emotional reactions to President Reagan's emotional expressions were jointly influenced by his expressions and their prior attitudes toward him, their emotional responses during exposure to the expressions—captured by electromyography that recorded facial muscle activity in response to the stimuli, skin conductance (i.e., a measure of emotional arousal) and heart rate—were only affected by his expressions and not by their prior attitudes (McHugo et al., 1985).

Beyond the evidence from social psychology, accumulating evidence from neuroscience has also lent support to the theory of primitive emotional contagion (Decety & Lamm, 2006). Similar neural circuits are activated when people experience emotions and when they observe others expressing emotions. For example, Functional Magnetic Resonance Imaging (fMRI) detects increased activity in similar areas of the brain when individuals observe or imitate facial expressions of various emotions (Carr, Iacoboni, Dubeau, Mazziotta, & Lenzi, 2003). Likewise, witnessing another person's bodily actions that signify emotions activates the regions in observers' brains that are

associated with perceiving and experiencing emotions (Grosbras & Paus, 2006). These findings suggest that observing emotional expressions of others induces a resonance in the observers' emotional system which is a key to understanding others' feelings.

Taken together, empirical research from social psychology and neuroscience has provided substantial support for the theory of primitive emotional contagion. One can experience the emotions of another person by automatically and unconsciously mimicking the emotional expressions of the observed person. Applied to mediated communication, the theory suggests that the overt emotional expressions of a victim of a chronic problem on the screen—including bodily, facial and/or vocal expressions—will evoke similar emotional reactions among audience members.

To be clear, the theory of primitive emotional contagion suggests that audience members will *share* the emotions of a victim represented in the media. Empathic concern, however, refers to reactive emotional experiences that are consistent with the perceived welfare of the victim (e.g., feeling sorry, sympathy, compassion and/or concern for the victim). Nonetheless, some researchers have argued that experiencing the emotional state of a suffering victim likely produces empathic concern for the victim, even though they disagree on exactly how parallel emotional reactions are transformed into empathic concern (Eisenberg, Shea, Carlo, & Knight, 1991; Lowenstein & Small, 2007). Consistent with this argument, one study found that sad

feelings of subjects, induced by pictures of sad victims, produced sympathy for the victims (Small & Verrochi, 2009). Hence, video footage (about the plight of victims of chronic problems) that contains a victim's overt emotional expressions should induce greater empathic concern for the victim among the audience than footage without such expressions.

It is unclear, however, whether and to what extent, the victims' emotional expressions also influence perspective taking. On one hand, Eisenberg and her colleagues (1991) have contended that higher-order cognitive activity such as perspective taking is the key to transforming shared emotional states into empathic concern. According to their logic, the overt emotional expressions of suffering victims should increase not only empathic concern but also perspective taking, and perspective taking mediates the effect of the emotional expressions on empathic concern. Other scholars (e.g., Lowenstein & Small, 2007), however, have claimed that victims' emotional expressions can directly elicit empathic concern without the intervention of higher-order cognitive activity such as perspective taking. In line with this argument, there is evidence that sharing victims' emotional states can produce sympathy for them without taking their perspectives, when no information about the victims is presented (Small & Verrochi, 2009). Hence, it is unclear how video footage displaying the

emotional expressions of a victim will influence perspective taking when the footage contains information about the victim's plight.

In sum, imitating the emotional expressions of a victim of a chronic problem represented in the media, as a result of exposure to his or her overt emotional expressions, allows audience members to share the emotional experience of the victim. The emotional sharing, in turn, produces empathic concern for the victim. Hence, footage showing a victim's overt emotional expressions should induce greater empathic concern than footage not displaying the expressions. However, little is known about whether and to what extent seeing the emotional expressions will motivate the audience to adopt the perspective of the victim. For this reason, this thesis will explore how exposure to the emotional expressions will influence perspective taking.

Geographic Proximity

In addition to the overt emotional expressions of a victim, the actual geographic distance between the audience and the victim may also matter. As the media bring tragedies in far-away places to our attention, it raises the question of whether the actual geographic distance between audience members and the victim influences how the audience emotionally reacts to the victim. In other words, do audience members show greater empathic concern if the victim is from a nearby place than if s/he is from a far-

away place? A nearby victim should produce greater empathic concern than a distant victim because people tend to form a concrete and detailed mental representation of a nearby victim even when they have *identical* information about nearby and distant targets (Trope & Liberman, 2003; Fujita, Henderson, Eng, Trope, & Liberman, 2006). A concrete and vivid mental representation should be more emotionally arousing than an abstract one (e.g., Dikert, 2008; Taylor & Thompson, 1982; Zillmann & Broius, 2000). Moreover, human evolutionary history may have genetically programmed people to empathize more with those close to home (Davis, 1996).

In broad terms, the construal level theory proposes that the psychological distance of targets influences one's mental representations of them such that psychologically distant targets are represented in terms of a few abstract features that define the targets (high-level construals), whereas psychologically near targets are represented in terms of their concrete and incidental details (low-level construals; Trope & Liberman, 2003; Trope, Liberman, & Wakslak, 2007). A target is perceived to be psychologically distant if it is not part of one's direct physical experience and, therefore, needs to be construed.

Then why does the mental representation of a target vary depending upon the target's psychological distance? A speculative explanation is that normally concrete and detailed information is available only for a psychologically near target but not for a

psychologically distant target. Because of this, people are compelled to conceive a distant target in more general and abstract terms (e.g., Trope & Liberman, 2003; Henderson, Fujita, Trope, & Liberman, 2006). An association is thus formed between psychological distance and levels of construal. This association is then over-generalized, leading people to continue using high-level construals for psychologically remote targets and low-level construals for psychologically close targets, even when they have *identical* information about the near and distant targets (e.g., Trope & Liberman, 2003; Henderson et al., 2006). To be clear, this explanation of the relationship between psychological distance and levels of construal suggests that the relationship is bidirectional. In other words, changes in the levels of construal used to portray a target should affect the perception of the psychological distance of the target in the same way as the distance of the target influences its mental construal (Trope et al., 2007). In line with this logic, a series of studies have demonstrated the mutual influences between various dimensions of psychological distance and construals of targets (see Trope et al., 2007 for an overview).

Most important for the purpose of this thesis, spatial distance is one dimension of psychological distance (Fujita et al., 2006). As the spatial distance from a target increases, a concrete and detailed mental representation of the target is increasingly replaced by a more abstract one. For example, after watching a video, subjects of a

study were asked to describe what they saw in writing. Compared to the subjects who were told that the video was filmed in a nearby place, those who were informed that the video was shot in a geographically distant place used more abstract language in their description (Fujita et al., 2006). This finding, thus, suggests that even when provided with the same information about near and far-away events, people tend to represent the former in more concrete and detailed terms in their mind. On the other hand, when given information about the same target at different levels of abstraction, people tend to perceive the target described in a concrete manner (e.g., portrayed in detailed and vivid terms or in pictures) to be spatially closer than the target portrayed in an abstract way (Trope et al., 2007). Moreover, implicit association tests have found that the response time is shorter for word pairs with a congruent distance construal level (i.e., near location and a low construal level or distant location and a high construal level) than for word pairs with an incongruent distance construal level (i.e., near location and a high construal level or distant location and a low construal level), which suggests that the association between spatial distance and construal levels may be activated automatically and unconsciously (Bar-Anan, Liberman, & Trope, 2006).

The observed relationship between spatial distance and construal levels indicates that, all else being equal, a nearby victim portrayed in the media will be represented in the minds of audience members by a concrete and detailed mental model whereas a

distant victim will by an abstract model. Given that a concrete and vivid representation should be more emotionally arousing than an abstract one (e.g., Dikert, 2008; Taylor & Thompson, 1982; Zillmann & Broius, 2000), a media portrayal of a nearby victim should induce greater empathic concern than a media portrayal of a distant victim.

The notion that people tend to show greater empathic concern for a nearby victim than for a remote victim is also consistent with an evolutionary explanation of the origins of empathy (Davis, 1996). To increase evolutionary success of their genes, individuals may promote the survival and reproduction of not only themselves and their relatives, but also those sharing their genes (Rushton, Russell, & Wells, 1984). Given that humans do not have the innate ability to recognize their kin or the presence of similar genes in non-kin, they are compelled to rely on cues associated with kinship—such as physical similarity, *geographic proximity*, and in-group status—to identify those that may share their genes. Helping individuals associated with these cues, thus, may have an evolutionary advantage, which may explain why people donate more to local causes than to national or international causes (Charity Review Council, 2007), and are more willing to help others sharing their cultural background than those with a different background (Sturmer, Snyder, Kropp, & Siem, 2006).

What role, then, does empathic concern play in the processing of helping others with kinship associated cues? Empathic concern may be a key mechanism underlying

the relationship between these cues and helping behavior (Davis, 1996). In other words, people tend to empathize with others associated with these cues; the empathic reactions, in turn, motivate people to help them. In line with this logic, there is evidence that observer-target similarity can evoke empathic concern among observers (Gruen & Mendelsohn, 1996; Houston, 1990).

However, no studies, to my best knowledge, have tested the impact of levels of mental construal on one's empathic reactions to a target. There is also no conclusive evidence to support the evolutionary explanation of the impact of kinship associated cues such as the geographic closeness of suffering others on empathic concern. Nonetheless, many have observed that people are more inclined to feel empathy for others nearby than for those in distant places (Hauser, 2006; Loewenstein & Small, 2007; Trout, 2008). Trout (2008), for instance, has noticed that one's empathy gap constantly fixes his or her focus on victims nearby. Similarly, Loewenstein and Small (2007) have observed that close proximity tends to increase sympathy for victims whereas distance tends to diminish it.

In line with these observations, there is evidence suggesting that people are less emotionally involved in events happening in far-away places than in events happening nearby. In one study, participants were asked to estimate the perceived geographic distance between Stockholm—where they were located—and ten other places, as well

as their degree of emotional involvement in important things that would happen in each place (Ekman & Bratfisch, 1965). The results showed that emotional involvement increased as the perceived geographic distance decreased. Likewise, another study conducted among a group of British undergraduates found that subjects expressed greater empathic concern for the victims of the natural disasters occurring in Europe (i.e., in Kaunas, a city in Eastern Europe) than for the victims of the disasters happening in South America (i.e., in Arezuela; Levine & Thompson, 2004). However, a more recent study—examining how people reacted to domestic (e.g., Hurricane Ivan in Florida) and international news (e.g., tsunami in Thailand) about natural disasters and accidents—did not find a main effect of domestic versus international news on subjects' emotional reactions (Kononova, Bailey, Bollis, Yegivan, & Jeong, 2009). Hence, current research has not shown a clear picture about the potential impact of the geographic proximity of victims on the audience's affective responses.

However, a close look at the three studies reviewed here suggests that none of them has provided convincing evidence with respect to the impact of the geographic closeness of victims on the audience's emotional reactions. Of the three studies, one using cross-sectional survey data found a positive relationship between *perceived* geographic proximity of 10 other places and subjects' emotional involvement in important things that would happen in these places (Ekman & Bratfisch, 1965).

Perceived geographic distance may or may not be the same as the actual geographic distance, and the cross-sectional nature of the data prevented the researchers from ascertaining the causal direction of the observed relationship. Although the other two studies (Kononova et al., 2009; Levine & Thompson, 2004) used experiments and manipulated the geographic proximity of the victims, their manipulation confounded the impact of the geographic proximity of the victims with the influences of other factors (e.g., nationality and perceived cultural distance). Hence, it is unclear to what extent the actual geographic distance between the victims and the subjects may have accounted for the observed significant or insignificant effects of the locations of the victims on the subjects' emotional responses.

Nonetheless, a victim in a nearby place should induce greater empathic concern than a victim in a far-away place because people tend to represent a nearby victim in more concrete and detailed terms in their minds; a concrete and vivid representation should be more emotionally arousing than an abstract one. Moreover, human beings may have been genetically programmed to empathize with and help others close to home. To be clear, the focus here is the impact of the actual geographic distance between the audience and the assumed location of a victim represented in the media, rather than the influences of other factors such as perceived social distance, similarity, or perceived affinity of the victim.

How, then, may the geographic proximity of a victim influence perspective taking? On one hand, geographic closeness may make it easier for the audience to adopt the perspective of the victim. Perspective taking requires audience members to have the ability and the repertoire of experiences necessary for understanding the victim's feelings and situation. The more geographically proximate the victim is, the more familiar one may be with the victim's situation. Therefore, a nearby victim may induce more perspective taking than a distant victim. On the other hand, if the social problem that the victim faces can happen anywhere (e.g., poverty and domestic violence), then being geographically close to the victim may not necessarily improve one's ability to comprehend the victim's situation or increase the likelihood that one shares the victim's experience. For this reason, the geographic closeness may not make one more familiar with the situation of the victim and, thus, may have little impact on perspective taking. In order for the geographic proximity manipulation to sound plausible (see Chapter 4 for details about the manipulation), this thesis uses social issues that can happen anywhere in the United States to test the effects of the geographic proximity of a victim on the outcome variables of interest. Consequently, the geographic closeness is expected to have little influence on perspective taking.

To summarize, the construal level theory suggests that, all else being equal, a nearby victim when portrayed in the media will be represented in the minds of the

audience by more concrete and detailed terms than a remote victim. To the extent that concrete and vivid mental representations are more emotionally arousing than abstract ones, the audience should experience stronger emotional reactions to a nearby victim than to a distant victim. Moreover, empathizing with and helping others nearby may be an innate tendency of human beings that has an evolutionary advantage. Hence, the audience should show greater empathic concern for a victim from a nearby place than for a victim from a far-away place. Although being geographically proximate, under some circumstances, may also improve audience members' ability to entertain the perspective of a victim by increasing their familiarity with the victim's situation, the geographic closeness may have little impact on perspective taking when the issue facing the victim can happen anywhere, and when being close does not enable the audience to better understand the victim's situation. Given that this thesis uses chronic problems that can happen anywhere in the United States to test the influence of the geographic proximity of a victim on the outcome variables of interest, the geographic proximity should have little impact on perspective taking.

Sensory Proximity

Although the actual geographic distance can inhibit empathic reactions people have toward distant others, the media—electronic media such as television in

particular—may diminish this effect by creating the impression of sensory closeness of a victim to the audience. One's emotions are usually tuned to the people experiencing distress right in front of him or her, but not to those who are unseen (Greene, as cited in Olson, 2008). In other words, one tends to be concerned about another person whom s/he can see, feel, touch, and/or hear (Loewenstein & Small, 2007).

This reasoning is corroborated by Milgram's (1974) famous studies of obedience to authority. Participants were ordered to punish another person using electronic shocks whenever the person gave a wrong answer to a test question. When subjects were not able to see or hear from the person, all of them administered the maximum numbers of shocks. As the sensory proximity of the person to the subjects increased—from hearing the person pounding the wall of the room, to hearing him verbally protesting, to seeing and hearing him suffering, to physically contacting him in order to give him the punishment—the number of shocks given by the subjects decreased significantly. This indicates that the presence of sensory inputs that are associated with a person's suffering can trigger empathic responses among people because they are no longer only aware of the person's pain in an abstract sense (Milgram, 1974). Rather, they are able to feel it.

According to a widely accepted definition of vividness proposed by Nisbett and Ross (1980), sensory closeness is one dimension along which the degree of vividness of

a message can vary. Sensory proximity can be created by a verbal description of an experience that evokes mental images. The phrase “tears in the eyes of a mother seeing her child dying,” for instance, can help people to picture, and therefore, sense the experience of the mother. More direct ways to induce the perception of sensory closeness are through direct sensory inputs, which is the focus of this thesis. Specifically, I examine two ways of bringing forth the perception of sensory closeness to a victim: showing a picture of the suffering experience of the victim and portraying the victim from close-up camera perspectives.

Visual images. Disturbing images of people in distress have long been thought capable of stirring emotions and fostering actions on behalf of these people like few, if any, alternative means of expression (Zillmann & Brosius, 2000). Although there are no well-established explanations of why visual images of victims’ plight are emotionally arousing (e.g., Zillmann & Brosius, 2000), arguably these images allow people to have a concrete sense of the victims’ suffering. This may explain why emotions are highly attuned to visuals, and the more concrete and vivid the images are, the more likely one is to be emotionally involved (Lowenstein & Small, 2007).

Indeed, there is evidence that visual images of human suffering can elicit emotions. In one study, subjects were asked to read a news article on the safety of amusement parks (Zillmann, Gibson, & Sargent, 1999). Some of them read the article

with a picture of a victim (of a roller-coaster accident) on a stretcher being placed into an ambulance; others did not see the picture. The results showed that subjects who saw the picture expressed greater concern for their personal safety than those who did not see the picture. Similarly, participants who were exposed to the pictures of a kidnap victim in captivity felt greater fear than those who did not see the pictures (Iyer & Oldmeadow, 2006). Along the same lines, a plane crash story with videos showing seriously injured, dying or dead victims evoked stronger negative emotions than the same story with videos not showing the victims (Lang & Newhagen, 1996). Moreover, compared to receiving only text messages about down syndrome (DS), receiving the messages along with a picture of a child with DS increased subjects' concern about having a child with DS (Figueiras, Price, & Marteau, 1999).

Scant research, however, has been conducted to test the effect of visual images of human suffering on empathic concern— a kind of other-oriented emotional reactions that can be translated into humanitarian aid for people in distress. To be clear, this thesis examines the effect of images depicting the suffering experience of a victim (e.g., an abused woman with bruises) rather than the effect of more non-specific or general images of the victim given that I am interested in how the media representation of human suffering affects empathic reactions of the audience. Nevertheless, the evidence

presented here suggests that the visual image of a suffering victim can elicit empathic concern among audience members by enabling them to sense the suffering of the victim.

In contrast to the expected positive effect of visual images of human suffering on empathic concern, exposure to the images may hinder people from taking the perspective of a victim. Perspective taking is a process requiring deliberate cognitive efforts (Omdahl, 1995). However, unlike text messages that stimulate people to process information in logical, rational and linear manners, visual images usually send people along emotive pathways by triggering quick adaptive reactions via automatic sensory processes that do not involve higher-order cognitive processes such as perspective taking (e.g., Joffe, 2008; Zajonc, 1980). Because of this, seeing the image of a suffering victim makes it possible for the audience to understand the victim's situation and feel for him or her without the engagement of higher-order cognitive processes such as perspective taking. In other words, adopting the perspective of the victim becomes less imperative in understanding the situation and the feelings of the victim in the presence of the image and, therefore, can be short-circuited.

Moreover, taking the perspective of a victim involves the suppression of one's own perspective (Davis, 1996) and an increased overlap between the cognitive representation of the self and that of the victim (Davis, Conklin, Smith, & Luce, 1996; Galinsky, Ku, & Wang, 2005; Galinsky & Moskowitz, 2000). Seeing the image of one

specific victim can make it difficult for audience members to project themselves into the shoes of the victim because they can easily notice the differences between themselves and the victim—in terms of age, gender and physical appearance, just to name a few—and, therefore, distance themselves from the victim. Hence, seeing an image of a suffering victim should hinder the audience from taking the perspective of the victim.

To summarize, a visual image of a suffering victim should induce greater empathic concern by allowing the audience to sense the experience of the victim. The image, however, may prevent the audience from taking the perspective of the victim through triggering quick adaptive responses—as a result of automatic sensory processes that do not involve higher-order cognitive processes—and through making it difficult for the audience to project themselves into the situation of the victim.

Visual images and geographic proximity. In addition to the expected positive effect of visual images of suffering victims on empathic concern, exposure to the images may also counteract the inhibiting impact of the actual geographic distance between the victims and the audience on empathic concern. As suggested by the aforementioned research into the relationship between construal levels of targets and their perceived proximity, a concrete portrayal of a suffering victim (e.g., showing his or her image) should make him or her seem closer. The *perceived* geographic closeness

of the victim (created by the image) may, in turn, help to diminish the negative effect of the *actual* geographic distance between the victim and the audience on empathic concern.

Moreover, as the media bring the experiences of distant others before one's own eyes, what one knows and experiences becomes less determined by where s/he is (Meyrowitz, 1985). Electronic media such as television is particularly effective in creating a sense of presence by allowing viewers to witness events unfolding no matter when or where the events occur. Hence, the assumed physical location of a suffering victim represented in the media may have little influence on people's emotional involvement with the victim as long as they can see and/or hear him or her; this suggests that the visual image of a suffering victim may counteract the negative effect of the actual geographic distance between the victim and the audience on empathic concern. Taken together, the negative effect of the actual geographic distance on empathic concern should be less evident when the image of a suffering victim is present than when the image is absent because the image can create a perception of geographic closeness of a distant victim and allow audience members to sense the suffering of the victim as if they were on the spot.

Camera perspectives. The intensity of perceived sensory proximity can vary depending upon the way that a victim is captured by a camera. Close-up camera

perspectives should create a greater perception of sensory proximity than medium or long perspectives. In this study, the close-up refers to the shot showing only human faces; the medium shot frames humans from the waist up; and the long-shot shows humans from knee up or further away (Bordwell & Thompson, 2001). A victim framed in close-ups is perceived to be physically closer. For this reason, a victim represented from close-up perspectives should induce greater empathic concern and higher levels of perspective taking than one portrayed from medium or long perspectives.

The distance between two people influences how they react to each other. Being physically close can intensify whatever kind of affective reaction—positive or negative—one has to another person (e.g., Schiffenbauer & Schiavo, 1976; Storms & Thomas, 1977). In one study, a confederate who sat either 2 feet or 5 feet away from a subject was instructed to give positive, negative, or neutral comments on the subject's strategy in solving a puzzle (Schiffenbauer & Schiavo, 1976). Sitting close induced greater liking for the confederate when s/he gave positive comments but caused more disliking when s/he offered negative comments.

The intensification occurs because greater physical closeness produces higher levels of emotional arousal (e.g., Middlemist, Knowles, & Matter, 1976; Smith & Knowles, 1979); higher levels of arousal signify greater intensity of emotional reactions and the nature of the reactions (e.g., positive or negative) is used to label the

intensification (Schachter & Singer, 1962). Consistent with this explanation, in a field experiment conducted in a male restroom with three urinals, a confederate was instructed to stand either immediately adjacent to the subject, one urinal away, or be absent (Middlemist et al., 1976). The results showed that the decrease in interpersonal distance between the confederate and subjects increased the delay of onset and decreased the persistence of urination. Given that the increase in the delay of onset and the decrease in the persistence of urination are associated with higher levels of arousal, the findings suggest that decreased interpersonal distance induces higher levels of arousal.

Moreover, the same arousal state can be labeled as various emotions, and the label is determined by one's appraisal of a situation. In one study, subjects were injected with epinephrine (aka adrenaline), a drug that increases physiological arousal (Schachter & Singer, 1962). Before being injected, some subjects were informed of the possible physiological effect of the injection (informed conditions), others were not told anything about the effect (ignorant conditions), and still others were misinformed about the effect (misinformed conditions). As a result, subjects in the ignorant and misinformed conditions were not aware that their arousal levels would increase. After the injection, subjects spent about 20 minutes with either a stooge acting euphorically or a stooge behaving in an angry fashion. The results showed that the emotional states of

subjects in ignorant and misinformed conditions were more likely than the emotional states of those in the informed conditions to be influenced by the mood of the stooge—that is feeling more euphoric or angry depending upon which stooge they met. The findings indicate that when people do not have appropriate explanations for experienced high levels of arousal, they rely on their perception of the situation to interpret it. Depending upon their appraisal of the situation, the same arousal state can be labeled differently. Hence, the induced higher levels of arousal, as a result of decreased interpersonal distance, can intensify whatever emotions one experiences.

Extending the logic to mediated communication suggests that perceived physical closeness to a victim, produced by screen close-ups, can intensify audience members' emotional reactions. People react to a person on the screen in a similar way that they do to an actual person. Although the human brain is certainly capable of differentiating real life from a picture as a result of cognitive processing, its primitive reactions to real and mediated experience are not so different because “there is no neural function or anatomical region [in the brain] designed to help humans differentiate mediated and unmediated experience and to change mental processing accordingly” (Detenber & Reeves, 1996, p. 66). For this reason, presenting a person on a larger screen is more likely to create the sense of personal space invasion than presenting him or her on a smaller screen (Lombard, 1995). Consequently, video images presented on a larger

screen are more arousing than those shown on a smaller screen (Reeves, Lang, Kim, & Tatar, 1999). Compared to evaluative responses to people on a smaller screen, the responses to the same people on a larger screen were more intense (Lombard, 1995; Lombard & Ditton, 1997). Likewise, when faces on the screen are perceived to be close—especially those framed in close-ups—they are evaluated more intensely than faces that seem further away (Reeves & Nass, 1996). For example, watching political candidates engaging in uncivil discourse in close-ups produces higher levels of arousal and intensifies negative attitudes toward the candidate with whom one disagrees (Mutz, 2007).

In addition to eliciting stronger emotional reactions, the increase in emotional arousal associated with decreased interpersonal distance also directs one's attention to the person close to him or her. If the person is perceived to be threatening or frightening, one tends to back away (e.g., Persson, 1998). If the person is unthreatening, one is prone to assess his or her intentions and/or feelings through scrutinizing his or her face (Matsumoto, 1989; Mertens, Siegmund, & Grusser, 1993; Reeves, 1993). Moreover, close interpersonal distance makes it possible for one to discern the details of the facial expressions of another person, which enables one to better read the mind of the person (Persson, 1998). Reading the mind of an unthreatening person, in turn, may prompt one to take the perspective of the person. If

one applies the same logic to mediated communication, it suggests that perceived physical closeness to an unthreatening victim, induced by screen close-ups, should motivate viewers to take the perspective of the victim by directing their attention to the thoughts and/or feelings of the victim, and by enabling them to discern the details of the victim's facial expressions.

In sum, portraying an unthreatening victim from close-up camera perspectives creates a sense of physical closeness. The perceived physical proximity, in turn, arouses greater empathic concern for the victim by inducing higher levels of emotional arousal that signify stronger emotional reactions. Moreover, the perception of physical closeness also motivates viewers to adopt the perspective of the victim by compelling them to assess the feelings and the intentions of the victim, and by allowing them to better read the mind of the victim.

Camera perspectives and overt emotional expressions. Beyond the main effect of close-up camera perspectives on empathic concern, close-ups should also intensify the positive effect of a victim's overt emotional expressions on empathic concern. This is because the camera perspectives used to frame a victim can moderate the effect of the victim's emotional expressions on emotional arousal such that the emotional expressions portrayed in close-ups will induce higher levels of arousal than the expressions captured from medium perspectives. Consistent with this reasoning,

there is evidence that the effect of arousing pictures on emotional arousal was stronger for larger screens than for either small or medium size screens (Codispoti & De Cesarei, 2007; Reeves et al., 1999).

As reviewed earlier in this chapter, the strength of facial muscle activity corresponds with the intensity of emotional experiences (indicated by levels of emotional arousal; Lanzetta et al., 1976; Zuckerman et al., 1981). Given that the overt emotional expressions of a victim can stimulate facial muscle movements and, therefore, increase levels of arousal among the audience, footage with the victim's emotional expressions should be more arousing than that without the expressions. Moreover, facial close-ups of a victim, like larger screens, are expected to heighten emotional arousal by creating a perception of physical closeness to the victim. Hence, portraying a victim from close-up camera perspectives should intensify the positive effect of the victim's emotional expressions on arousal. As higher levels of emotional arousal signify stronger emotional reactions, close-up camera perspectives should be able to accentuate the positive effect of the victim's emotional expressions on empathic concern.

To summarize, the perception of sensory proximity of a victim can be created via a visual image of the victim's suffering experience or by framing him or her in close-ups. Seeing the image should induce greater empathic concern by allowing the

audience to sense the victim's suffering. The exposure, however, may also prevent audience members from entertaining the perspective of the victim through eliciting quick adaptive responses (as a result of automatic sensory processes that do not involve higher-order cognitive processes such as perspective taking), and by making it difficult for them to project themselves into the situation of the victim. Moreover, the presence of the image of a suffering victim may diminish the negative effect of the actual geographic distance between the audience and the victim on empathic concern, because exposure to the image makes a distant victim seem closer and enables audience members to witness the victim's experience as if they were on the spot.

By creating a sense of physical closeness, portraying a victim from close-up camera perspectives can induce higher levels of emotional arousal than capturing him or her from medium or long perspectives. Given that higher levels of arousal indicate stronger emotional reactions, close-up perspectives should evoke greater empathic concern. Moreover, framing an unthreatening victim in close-ups should also focus viewers' attention on the intentions and the feelings of the victim, and allow them to better read the mind of the victim. Because reading the mind of the victim can prompt viewers to take the perspective of the victim, portraying the victim from close-up perspectives should also increase perspective taking. In addition to the main effect of close-up perspectives on empathic concern, close-ups of a victim can also accentuate

the positive effect of the victim's overt emotional expressions on empathic concern by intensifying the impact of the expressions on emotional arousal.

As mentioned in Chapter 1, the ultimate goal of inducing empathic concern for people suffering from chronic problems is to elicit aid for them. Hence, I am also interested in whether and to what extent the empathic concern evoked for one victim of a chronic problem will be translated into support for the interventions that benefit the victim group as a whole and private helping behavior to the group. To answer this question, the following section brings forward the empathy-attitude-action model proposed by C. D. Batson and his colleagues (2002), which explains why empathic concern felt for one victim should produce favorable attitudes toward the interventions and personal helping behavior.

The Empathy-Attitude-Action Model for the Effects of Empathic Concern

Originally tested in studies of the effects of empathic concern on attitudes and helping behavior toward members of stigmatized groups, the empathy-attitude-action model posits that 1) empathic concern felt for a member of a stigmatized group leads to a perception of increased valuing of the member's welfare; 2) as long as the group identity is considered as a salient component of the situation toward which empathic concern is evoked, the increased valuing of the member's welfare extends to the group

as a whole and results in positive attitudes toward the group; and 3) these positive attitudes, in turn, motivate helping behavior to the group (Batson, C. D. et al., 2002).

This model has been supported by a number of studies (Batson, C. D. et al., 2002; Batson, C. D. et al., 1997; Batson, C. D., Turk, et al., 1995; Clore & Jeffery, 1972; Coke, Batson, C. D., & McDavis, 1978). For example, it was found that the empathic concern induced for a young woman with AIDS, or a homeless man, or a convicted murderer improved attitudes toward the group to which the target belonged (Batson, C. D. et al., 1997). Compared to subjects who experienced lower levels of empathic concern for a convicted heroin addict and dealer, those experiencing higher levels of empathic concern allocated more student funds to an agency that helped drug addicts (Batson, C. D. et al., 2002). Path analyses showed that experiencing empathic concern led to caring for the addict's welfare; the increased caring, in turn, produced positive attitudes and helping behavior toward people addicted to hard drugs.

More importantly, the positive attitudinal and behavioral impact of empathic concern may last long after the feeling has vanished. In one study, improved attitudes toward convicted murderers, as a result of induced empathic concern for a convicted murderer, was found 1-2 weeks after subjects listened to an interview with the murderer (Batson, C. D. et al., 1997). In another study, participants expressed strong support for spending student funds on facilities for the disabled, four months after empathic

concern for disabled students was evoked via role-playing (Clore & Jeffery, 1972).

Extending the logic of the empathy-attitude-action model to the context of this thesis suggests that empathic concern felt for one victim of a chronic problem can increase support for the interventions that alleviate the suffering of the victim group and produce personal helping behavior to the group, as long as the group membership is a salient component of the victim's plight.

Taken together, the theories and research reviewed in this chapter indicate that the overt emotional expressions, geographic proximity and sensory proximity (manifested via a picture of the suffering experience of a victim or close-up camera perspectives used to frame the victim) of a victim will evoke empathic concern for the victim among the audience. The induced empathic concern, in turn, will produce favorable attitudes toward the interventions that benefit the victim group and personal helping behavior to the group. Contrary to the argument that perspective taking is necessary for experiencing empathic concern, the facilitators of empathic concern examined here may not always motivate the audience to adopt the perspective of the victim. To be specific, although portraying a victim from close-up camera perspectives is expected to increase perspective taking, seeing the image of a suffering victim should reduce the likelihood

of the audience adopting the victim's perspective. Moreover, it is unclear how the victim's overt emotional expressions will influence perspective taking. With all these in mind, I propose a series of hypotheses and a research question in the next chapter.

Chapter 3. The Expected Effects of Overt Emotional Expressions, Geographic Proximity, and Sensory Proximity on Empathy and Humanitarian Aid

This chapter puts forward the hypotheses and research question regarding the effects of the overt emotional expressions, geographic proximity and sensory proximity of a victim on the outcome variables of interest. All the hypotheses are labeled by a number (used to indicate the outcome variable under study) and a sub-letter under the number (see Appendix F for a complete list of the hypotheses and research question).¹ The chapter is organized by the outcome variables under examination. It begins with the hypotheses and research question about the effects of the three factors (i.e., the overt emotional expressions, geographic proximity and sensory proximity of a victim) on the audience's psychophysiological responses, empathic concern and perspective taking. It, then, proposes the hypotheses with respect to the impact of the factors on the audience's attitudes toward the interventions that benefit the victim group and private helping

¹ To be specific, H1s are about the effects of the factor(s) on audience's brow activity, H2s the effects on emotional arousal, H3s on empathic concern for the victim, H4s perspective taking, H5s attitudes toward the interventions that benefit the victim group, and H6s private helping behavior to the group. H7s are about the mediating role played by empathic concern in the relationships between the factors and attitudes toward the interventions, and H8s the mediating role of empathic concern in the relationships between the factors and helping behavior.

behavior to the group. The chapter ends with the predictions on the mediating role that empathic concern may play in the relationships between the factors and the attitudinal and behavioral outcome variables under study.

Psychophysiological Responses, Empathic Concern, and Perspective Taking

The overt emotional expressions of a victim are expected to elicit empathic concern among the audience because audience members automatically and unconsciously imitate the emotional expressions of the victim (indicated by an increase in facial muscle movements); this imitation causes the audience to experience the emotional state of the victim (accompanied by increased emotional arousal). Sharing the emotional state of the victim, in turn, evokes empathic concern for him or her. In line with this reasoning, I propose the following hypotheses:

H1a: Exposure to the overt emotional expressions of a victim (i.e., crying in the case of this thesis) will increase brow activity among the audience (an indicator of imitating the negative emotional expressions of the victim).

H2a: Exposure to the overt emotional expressions of a victim will increase levels of emotional arousal among the audience.

H3a: Exposure to the overt emotional expressions of a victim will arouse greater empathic concern for the victim than not seeing the expressions.

It is unclear, however, whether and to what extent the victim's overt emotional expressions will influence perspective taking because researchers have not reached agreement on the role that perspective taking plays in transforming emotional sharing into empathic concern. Hence, this thesis will explore the following research question:

R1: How will exposure to a victim's overt emotional expressions influence perspective taking?

Beyond the overt emotional expressions of a victim, the actual geographic distance between the audience and the assumed location of the victim can also influence how audience members react to the victim. Compared to the mental representation of a distant victim, that of a nearby victim is usually more concrete and detailed. To the extent that a concrete and vivid representation is more emotionally arousing than an abstract one, people should experience stronger emotional reactions to a nearby victim than to a remote victim. Moreover, the theory about the evolutionary origins of empathy also suggests that human beings may have been genetically programmed to empathize with and help others close to home in order to promote the survival of their own genes. Thus,

H3b: A media portrayal of a nearby victim will induce greater empathic concern than that of a distant victim.

Given that this thesis examines the effects of the geographic proximity of a victim in the context of social problems that can happen anywhere in the United States, being geographically closer to the victim should not improve audience members' ability to understand the feelings and situation of the victim—an ability that is necessary for adopting the perspective of the victim. For this reason, the geographic proximity should have little impact on perspective taking.

In addition to the influences of the geographic proximity, this thesis also explores the effects of the sensory proximity of a victim. Seeing a victim in distress should arouse greater empathic concern than without such sensory inputs because the inputs allow the audience to better sense the victim's suffering. Therefore,

H3c: Seeing an image of the suffering experience of a victim (e.g., the malnourished body of a hungry child) will evoke greater empathic concern for the victim relative to not seeing the image.

The image, however, may prevent the audience from taking the perspective of the victim. Visuals, unlike text messages, can trigger quick adaptive reactions via automatic sensory processes that do not involve higher-order cognitive processes such as perspective taking; as a result, the process of adopting the perspective of a suffering victim may be bypassed when the image of the victim is present. Moreover, seeing the image of one specific victim can make it difficult for audience members to project

themselves into the situation of the victim because they can easily identify the differences between themselves and the victim and, therefore, distance themselves from the victim. As a result,

H4a: Seeing an image of the suffering experience of a victim will reduce perspective taking on the part of the audience.

Besides the expected positive effect of seeing the victim's picture on empathic concern, exposure to the picture should also diminish the inhibiting effect of the actual geographic distance between the audience and the victim on empathic concern. This is because the presence of the image makes a distant victim seem closer and allows the audience to witness the experiences of the victim as if they were on the spot. Hence,

H3d: The negative effect of the actual geographic distance between a victim and the audience on empathic concern should be more evident when an image of the victim's suffering experience is absent than when the image is present.

Moreover, the perceived intensity of the sensory proximity of a victim may also vary depending upon the camera perspectives used to capture the victim. Compared to medium camera perspectives, close-up perspectives should create a greater perception of sensory closeness. Victims captured in close-ups are perceived to be physically closer. To the extent that facial close-ups of a victim create a sense of physical

closeness, viewers should experience higher levels of arousal and, therefore, stronger emotional reactions to the victim. Because of this,

H2b: Framing a victim in close-ups will induce higher levels of emotional arousal among the audience than portraying him or her from medium camera perspectives.

H3e: Portraying a victim from close-up camera perspectives will arouse greater empathic concern for the victim than capturing him or her from medium perspectives.

The increased emotional arousal, as the result of the perceived spatial intimacy created by close-ups, should also focus viewers' attention on the feelings and intention of an unthreatening victim and prompt them to read the mind of the victim. Besides this, facial close-ups also make it possible for audience members to discern the details of the facial expressions of the victim, which enables them to better read the mind of the victim. Reading the mind of the victim, in turn, compels the audience to adopt the perspective of the victim. For this reason,

H4b: Portraying a victim from close-up camera perspectives will motivate the audience to take the perspective of the victim.

Beyond the expected positive effect of facial close-ups on empathic concern, close-up camera perspectives may also accentuate the predicted positive effect of a

victim's overt emotional expressions on empathic concern. This is because portraying the victim from close-up perspectives can heighten the positive effect of the emotional expressions on emotional arousal. Given that higher levels of arousal signify stronger emotional reactions, close-up camera perspectives should also magnify the anticipated positive effect of the emotional expressions on empathic concern. Thus,

H2c: The expected positive effect of a victim's overt emotional expressions on emotional arousal will be more evident when the victim is framed in close-ups than when s/he is portrayed from medium perspectives.

H3f: The expected positive effect of a victim's overt emotional expressions on empathic concern will be more evident when the victim is captured by close-ups than when s/he is portrayed from medium perspectives.

Attitudes toward the Interventions and Personal Helping Behavior

When it comes to the effects on attitudes toward the interventions that benefit the victim group and personal helping to the group, empathic concern felt for one victim should lead to increased valuing of the welfare of the victim group as a whole, as long as the group membership is a salient component of the situation toward which empathic concern is evoked. The increased valuing of the well-being of the group then helps to improve attitudes toward the group and prompts helping behavior on behalf of the

group. Put differently, when a victim's suffering is considered to be typical for the members of the group to which s/he belongs, the empathic concern felt for the victim will result in positive attitudes and helping behavior toward the group. In line with this reasoning, facilitators of empathic concern for a victim should also elicit support for the interventions that benefit the victim group and personal helping behavior to the group, as long as the victim is perceived to be a typical member of the group. Therefore,

H5a: To the extent that exposure to the overt emotional expressions of a victim has a positive effect on empathic concern, such exposure will elicit support for the interventions that benefit the victim group.

H6a: To the extent that exposure to the overt emotional expressions of a victim has a positive effect on empathic concern, such exposure will produce private helping behavior to the victim group.

H5b: To the extent that the geographic proximity of a victim has a positive effect on empathic concern, a media portrayal of a nearby victim will induce more support for the interventions than that of a distant victim.

H6b: To the extent that the geographic proximity of a victim has a positive effect on empathic concern, a media portrayal of a nearby victim will produce more helping behavior than that of a distant victim.

H5c: To the extent that seeing an image of the suffering experience of a victim has a positive effect on empathic concern, such exposure will increase support for the interventions.

H6c: To the extent that seeing an image of the suffering experience of a victim has a positive effect on empathic concern, such exposure will elicit personal aid for the victim group.

H5e: To the extent that portraying a victim from close-up camera perspectives has a positive effect on empathic concern, facial close-ups of the victim will increase support for the interventions.

H6e: To the extent that portraying a victim from close-up camera perspectives has a positive effect on empathic concern, facial close-ups of the victim will produce personal help for the victim group.

Moreover, to the extent that the image of the victim's suffering experience diminishes the expected negative effect of the actual geographic distance between the victim and the audience on empathic concern, a similar interaction between the image and the geographic distance should also occur for attitudes toward the interventions and helping behavior. As a result,

H5d: To the extent that the expected negative effect of the actual geographic distance between a victim and the audience on empathic concern is more evident

when a picture of the victim's suffering experience is absent than when the picture is present, a similar interaction effect of the geographic distance and the picture should also occur for attitudes toward the interventions.

H6d: To the extent that the expected negative effect of the actual geographic distance between a victim and the audience on empathic concern is more evident when a picture of the victim's suffering experience is absent than when the picture is present, a similar interaction effect of the geographic distance and the picture should also occur for helping behavior.

As for the interaction of the victim's overt emotional expressions and camera perspectives, the positive effects of the emotional expressions on the attitudes and helping behavior should be more evident when the victim is framed in close-ups than when s/he is captured from medium perspectives if there is an anticipated interaction between the emotional expressions and camera perspectives on empathic concern.

Because of this,

H5f: To the extent that the expected positive effect of a victim's overt emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium perspectives, a similar interaction between the emotional expressions and camera perspectives should occur for attitudes toward the interventions.

H6f: To the extent that the expected positive effect of a victim's overt emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium perspectives, a similar interaction between the emotional expressions and camera perspectives should occur for helping behavior.

The Mediating Role of Empathic Concern

Finally, to the extent that the overt emotional expressions, geographic proximity, picture of a suffering victim, camera perspectives, geographic proximity X picture, and emotional expressions X camera perspectives exert the anticipated influences on attitudes toward the interventions and helping behavior, these observed effects should be mediated by empathic concern felt for the victim. Hence,

H7a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on attitudes toward the interventions that benefit the victim group, the observed effect should be mediated by empathic concern felt for the victim.

H8a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on private helping behavior to the victim group, the observed effect should be mediated by empathic concern.

H7b: To the extent that the geographic proximity of a victim has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern.

H8b: To the extent that the geographic proximity of a victim has a positive effect on helping behavior, the observed effect should be mediated by empathic concern.

H7c: To the extent that exposure to a visual image of the suffering experience of a victim has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern.

H8c: To the extent that exposure to a visual image of the suffering experience of a victim has a positive effect on helping behavior, the observed effect should be mediated by empathic concern.

H7e: To the extent that framing a victim in close-ups has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern.

H8e: To the extent that framing a victim in close-ups has a positive effect on helping behavior, the observed effect should be mediated by empathic concern.

H7d: To the extent that there is an expected interaction of the geographic proximity and the victim's picture on attitudes toward the interventions, the observed effect should be mediated by empathic concern.

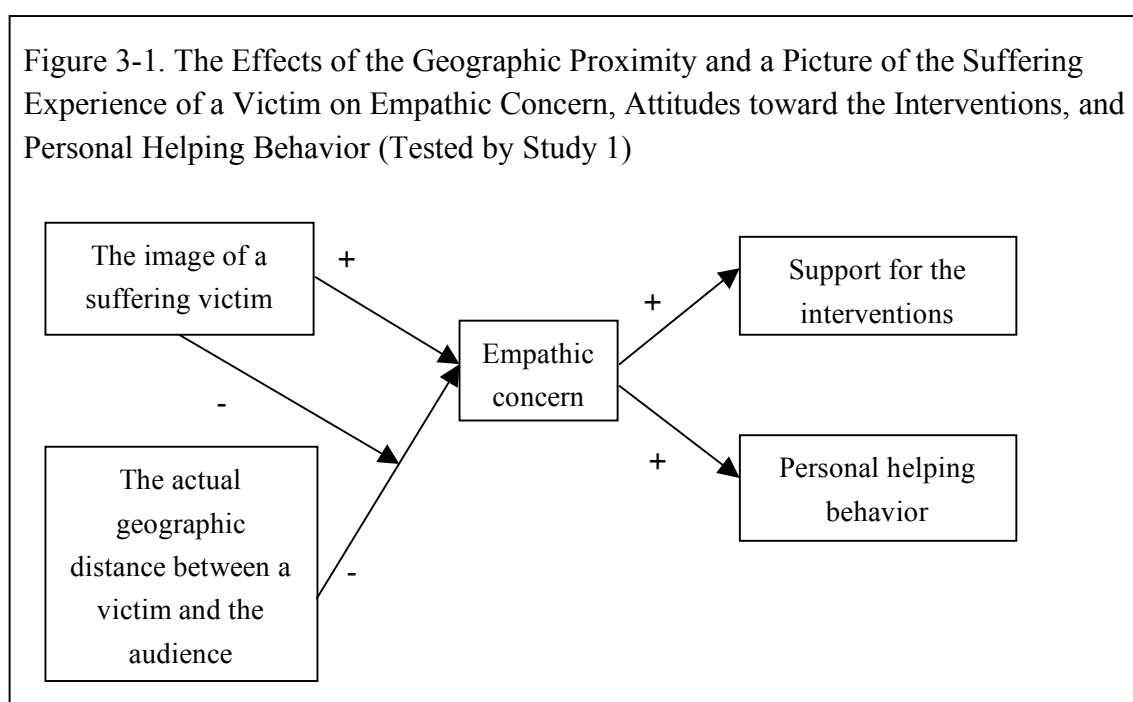
H8d: To the extent that there is an expected interaction of the geographic proximity and the victim's picture on helping behavior, the observed effect should be mediated by empathic concern.

H7f: To the extent that there is an expected interaction of the victim's overt emotional expressions and camera perspectives on attitudes toward the interventions, the observed effect should be mediated by empathic concern.

H8f: To the extent that there is an expected interaction of the victim's overt emotional expressions and camera perspectives on helping behavior, the observed effect should be mediated by empathic concern.

Taken together, the hypotheses proposed in this chapter suggest that the visual representation of the suffering experience of a victim of a chronic problem can not only evoke empathic concern for the victim but also counteract the expected negative effect of the actual geographic distance between the victim and the audience on empathic concern. More importantly, the expected effect of the visual representation and

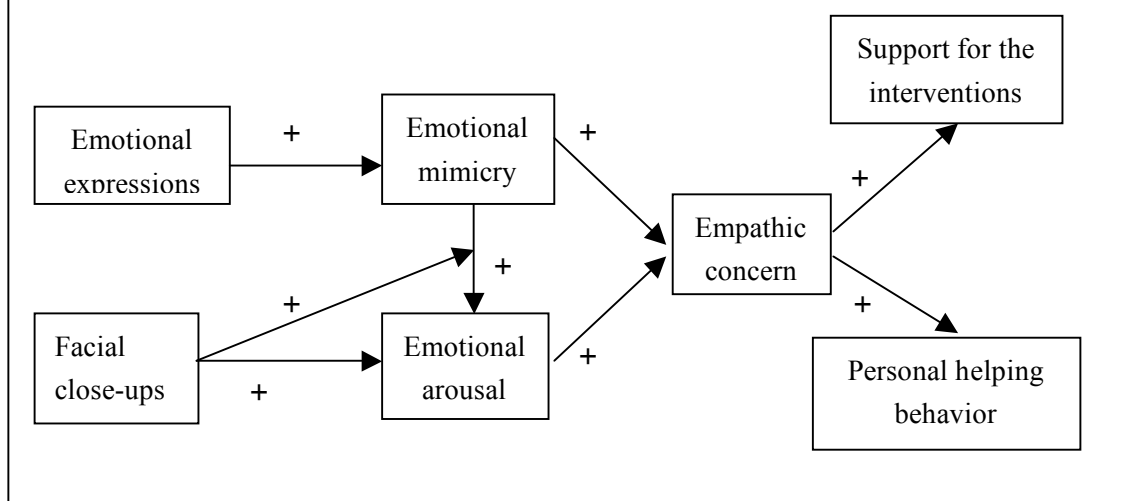
geographic proximity of the victim on empathic concern can be translated into positive attitudes toward the interventions that benefit the victim group and personal helping behavior to the group (see Figure 3-1 for a model elaborating the expected effects of the visual representation and geographic proximity of a victim on the outcome variables of interest).



In addition to recognizing the important role that the visual representation of human suffering plays in eliciting empathic concern and help for people in need, the hypotheses presented here also specify what aspects of the representation may further increase empathic concern and, therefore, humanitarian aid for people in distress. Specifically, they suggest that portraying a victim from close-up camera perspectives

can not only arouse greater empathic concern for the victim but also heighten the expected positive effect of displaying the over emotional expressions of the victim on empathic concern. Again, the anticipated effect of the victim's overt emotional expressions and camera perspectives on empathic concern should be translated into support for the interventions (that reduce the needs of the victim group) and personal helping behavior (see Figure 3-2 for a model elaborating the expected effects of the emotional expressions and camera perspectives on the outcome variables of interest).

Figure 3-2. The Effects of a Victim's Overt Emotional Expressions and Camera Perspectives on Psychophysiological Responses, Empathic Concern, Attitudes toward the Interventions, and Personal Helping Behavior (Tested by Study 2)



Finally, contrary to the argument that perspective taking is necessary for experiencing empathic concern, my hypotheses suggest that not all the facilitators of empathic concern increase perspective taking on the part of the audience. For instance, although facial close-ups of a victim are expected to have a positive effect on empathic

concern and perspective taking, the visual image of the suffering experience of the victim should increase empathic concern but decrease perspective taking. The following chapter will lay out the designs and analytical procedures of two studies.

Study 1 is designed to test the model presented in Figure 3-1 and the effect of a picture of a suffering victim on perspective taking. Study 2 tests the model in Figure 3-2 and the effect of a victim's overt emotional expressions and camera perspectives on perspective taking.

Chapter 4. Research Designs and Analytical Procedures

Two experiments were conducted to examine the hypotheses and research question proposed in Chapter 3. The experimental design was suitable for the purpose of this thesis because it allowed me to ascertain the causal relationships between the three factors—the overt emotional expressions, geographic proximity and sensory proximity of a victim—and the outcome variables of interest, while controlling for potential influences of other factors that may affect the relationships. The rest of this chapter presents the designs and analytical procedures of the two studies.

Study 1

Experimental design. Study 1 was a survey-experiment. It used two social issues to test the effects of the geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience) of a victim on the audience's empathic concern, perspective taking, attitudes toward the interventions that benefit the victim group, and personal helping behavior to the group (measured by actual donation behavior and helping intentions). To be specific, the study was a 2 (geographic proximity: victims living in the state where subjects lived vs. living in a far away state in the United States) by 2 (picture: with a picture of a suffering victim vs. without the

picture) by 2 (two issues: domestic violence vs. hunger among children) between-subject design with a separate control condition, for a total of nine conditions (see Figure 4-1 for the study design).

Figure 4-1. Experimental Design for Study 1

		Location of the Victim	
		Own State	Far-away State
A Picture of the Victim	No	Story on domestic violence	Story on domestic violence
		Story on hunger among children	Story on hunger among children
	Yes	Story on domestic violence	Story on domestic violence
		Story on hunger among children	Story on hunger among children

Control
Condition

A far-away state in the United States was chosen as the distant place rather than another country because it helped to reduce the potential confounding effects of other factors (e.g., nationality and perceived cultural proximity) on the outcome variables of interest. I used two issues to test the effects of the two factors (i.e., the geographic proximity and a picture of a suffering victim) on the outcome variables so that the findings were less likely to be dependent on the idiosyncrasies of one particular issue. Given that the impact of the two issues on the outcome variables are of little theoretical interest, and that I do not expect the effects of the two factors on the outcome variables to differ by issue, the rest of this thesis focuses on the effects of the two factors.

Material. Two stories that can happen anywhere in the United States were created. One was about Susanna, a woman who was abused by her husband, and the

other was about David, a boy suffering from hunger (see Appendix A for the stories). Geographic proximity was manipulated by changing the name of the state where the victim lived (see Appendix A for details). For example, if a participant lived in Philadelphia, s/he was told that the victim lived in rural Pennsylvania for the nearby condition and in rural Montana for the distant condition. To manipulate the sensory proximity of the victim, I used two pictures for the two topics: one showing an abused woman with bruises and the other a malnourished boy (see Appendix A for the pictures). The caption below the picture indicated that the person in the picture was the one in the story. The story and picture were placed on separate pages with the story preceding the picture. The stories and pictures used here were similar to those on charity websites and/or in charity advertisements.

Participants. Given that the pictures suggested that the two victims—Susanna and David—were white, this study was conducted among white (and non-Hispanic) subjects ($N = 1326$) through a survey research company, Knowledge Networks. The subjects were randomly selected from the active members of a research panel that was maintained by Knowledge Networks; the panel was established using probability sampling to represent the entire United States population. Of all the participants of this study, 47% were male and 53% were female. They had a mean age of 47.82 ($SD = 15.79$).

Procedure. The study was administered via Knowledge Networks and completed on subjects' personal computers at a time and a place they chose. Each participant received a notification email from Knowledge Networks in which a button to start the study was included. Participants were randomly assigned to one of nine conditions (i.e., eight experimental conditions and one control condition). At the beginning of the study, they were informed that 5,000 bonus points (worth \$5.00) were going to be credited to their Knowledge Networks account once they completed the study.

After this, subjects in the experimental conditions were told that the rest of the study was about their reactions to information about an actual person. They then read a story about an abused woman (Susanna) or a hungry boy (David) with or without a picture of the person, depending upon the experimental condition. Upon finishing the story, subjects answered two sets of questions, one tapping their empathic concern for the victim and the other measuring the extent to which they took the perspective of the victim.² They then completed the questions capturing the amount of money they would like to donate to a charitable organization that helped the victim group (i.e., abused women or hungry children), their willingness to ask others they knew to make donations

² To counterbalance the potential influences of the responses to the two sets of questions on each other, the order of the two sets of questions was randomized.

(as an indicator of intentions to offer help to the group), and their attitudes toward the interventions that benefited the group. The posttest for experimental conditions ended with manipulation check questions.

Participants in the control condition, on the other hand, did not read any story. After being informed of the \$5.00 incentive, they answered a questionnaire identical to that used in the experimental conditions except that it did not include the measures of empathic concern and perspective taking. The measures were excluded from the questionnaire because they tapped participants' reactions to the victim portrayed in the story (e.g., the extent to which a participant felt sorry for Susanna or David) and did not make sense to those who had not read the story. Given that asking participants to make donations to two causes (or simply help two victim groups) in a row may reduce the amount of money (or help) they would like to offer to the second cause (or group), only half of the respondents in the control condition were asked about their intentions to help abused women and the amount of money they would like to donate to a charitable organization that offered aid to abused women. The other half answered similar questions about hungry children. All the participants in the control condition, however, answered the attitude-toward-the-intervention questions for both issues.³

³Participants in the control condition were randomly assigned to one of the two question orders: 1) questions on providing private help to abused women and attitudes toward the

Measures.⁴ Empathic concern was captured by five items adapted from studies conducted by C. D. Batson and his colleagues (e.g., Batson, C. D. et al., 2002; Batson, C. D. et al., 1997; see Appendix B for measures used in Study 1 and Appendix D for correlations among outcome variables of Study 1). The measure captured the extent to which participants experienced a series of emotions (e.g., compassion or sorry for the victim) when they read the story. Previous research has shown that the measure is highly reliable (alpha coefficients higher than .90) and valid. It was found to be positively associated with caring for a target person's welfare as well as favorable attitudes and helping behavior toward the group that the target represents (e.g., Batson, C. D. et al., 2002; Batson, C. D. et al., 1997). To create a scale of empathic concern ($M = 5.76$; $SD = 1.24$; *Cronbach's Alpha* = .97), I averaged each subject's scores on the five items. The same method was used to create scales for other variables in Study 1.

Taking the perspective of the victim was tapped by four items created based upon the perspective-taking subcomponent of the Interpersonal Reactivity Index (Davis, 1980). The original perspective taking index is a reliable measure of individuals'

interventions that benefited abused women->questions on attitudes toward the interventions that helped hungry children, or 2) questions on offering private aid to hungry children and attitudes toward the interventions that benefited hungry children->questions on attitudes toward the interventions that helped abused women.

⁴ No demographic variables were measured in this study because Knowledge Networks had the information in its database.

perspective taking abilities (alpha coefficient ranging between .70 and .80; Davis, 1980; Mutz & Nir, in press; Richardson, Green, & Lago, 1998). People scoring high on the scale are more tolerant of dissonant political views than those scoring low on the scale (Mutz, 2002). Consistent with the expectation that perspective-taking is associated with aggression inhibition and facilitation of pro-social responses, people with higher perspective-taking scores show fewer and less aggressive responses to attacks than those with lower scores (Richardson et al., 1998). Moreover, when adapted to the context of political deliberation, the scale predicts opinion shifts in a socially beneficial direction (Muhlberger, 2005). Given that the original measure was created to assess individuals' ability to take on the perspective of others in interpersonal communication, I modified the measure to capture participants' perspective-taking experiences during the story reading. To be specific, participants of this study were asked to rate a series of four statements such as "When I read about David, I imagined what it was like to be in his situation" on 7-point agree-disagree scales (for the perspective taking scale, $M = 4.74$; $SD = 1.19$; *Cronbach's Alpha* = .82).⁵

Actual donation behavior was measured by asking participants to specify the amount of money they would like to contribute to a charitable organization that helped abused women or hungry children ($M = 2.56$; $SD = 5.49$). If a participant donated less

⁵ To be clear, questions with reverse wording were reverse coded before I created scales.

than \$5.00, Knowledge Networks made the donation on behalf of him or her;⁶ if s/he wanted to donate more than \$5.00, s/he could donate the amount over \$5.00 (e.g., \$1.00 if s/he wanted to donate \$6.00 in total) via a link to the organization's donation web page that appeared on the screen at the end of the study. Helping intentions were tapped by a question asking respondents to rate on a 7-point agree-disagree scale their willingness to help abused women or hungry children by asking people they knew to donate ($M = 3.64$; $SD = 1.52$).

Attitudes toward the interventions that benefited the victim group were captured by seven items (for the attitude scale, $M = 4.92$; $SD = .93$; *Cronbach's Alpha* = .76). These items asked respondents to what extent they agreed or disagreed that more should be done by the government or civic groups and charities to help abused women or hungry children. The answer again was rated on 7-point agree-disagree scales.

Manipulations were checked by two questions. One (for geographic proximity) asked subjects where the victim lived. The other (for sensory proximity) asked to what extent subjects could see the suffering of the victim when they read his or her story; the answer to the question was again captured on a 7-point agree-disagree scale ($M = 5.25$; $SD = 1.43$). Of participants in the own state conditions, 98% correctly recalled where

⁶ That is to say, Knowledge Networks took the amount of the money (\$5.00 or less) that a participant wanted to donate from his or her Knowledge Networks account and made the donations in his or her name.

the victim lived; the percentage for the far-away state conditions was 96%. Moreover, an independent t test using the picture (i.e., with vs. without the picture) as the grouping variable showed that participants who were exposed to the picture ($M = 5.78$) were more likely than those who were not exposed to the picture ($M = 4.71$; $p = .08$, one-tailed test) to claim that they saw the suffering of the victim.⁷

Analytical procedure. To test the hypotheses regarding the effects of the geographic proximity and a picture about the suffering experience of a victim on empathic concern and perspective taking, I conducted two-by-two-by-two analyses of variance. Although the focus of Study 1 was the effects of the geographic proximity and the picture, the study also included chronic problems as a between-subject factor for the purpose of replication, so that the findings of the study did not depend entirely upon a particular issue or picture. Because of this, I used two-by-two-by-two analyses of variance to examine the impact of the geographic proximity and the picture on the outcome variables. To the extent that the factor(s) of interest had an expected effect on empathic concern, the effects of the factor(s) on attitudes toward the interventions and helping behavior (indicated by actual donation behavior and helping intentions) were also examined using two-by-two-by-two analyses of variance. If the analyses found

⁷ All the significance levels reported in this thesis were based upon two-tailed tests unless specified otherwise.

the anticipated impact of the factor(s) on the attitudes and/or helping behavior, then the mediating role of empathic concern in the observed relationship(s) was tested—using a series of ordinary least square (OLS) regression models—to shed light on the mechanism through which the factor(s) may influence people’s attitudes and/or behavior. Finally, I examined the effects of reading the story about the victim on participants’ attitudes and behavior. To do so, independent t tests were conducted to investigate whether subjects in the experimental conditions, on average, expressed more favorable attitudes toward the interventions and/or were more willing to offer personal help to the victims than subjects in the control condition.

Study 2

Experimental design. Study 2 was a laboratory experiment that used two chronic problems to test the effects of the overt emotional expressions and sensory proximity (manifested via facial close-ups of a victim) of a victim on viewers’ empathic concern, perspective taking, attitudes toward the interventions that benefited the victim group, and intentions to offer personal aid to the group. The study was a 2 (overt emotional expressions: with vs. without) by 2 (camera perspectives: close-up vs. medium) between-subject design with an additional control condition, for a total of five conditions (see Figure 4-2 for the study design).

Figure 4-2. Experimental Design for Study 2.

		Camera Perspectives	
		Medium	Close-up
Overt Emotional Expressions of the Victim	No	Video on domestic violence and video on the lack of benefits for disabled war veterans	Video on domestic violence and video on the lack of benefits for disabled war veterans
	Yes	Video on domestic violence and video on the lack of benefits for disabled war veterans	Video on domestic violence and video on the lack of benefits for disabled war veterans

Control Condition

Note. The order in which the two videos were presented was counterbalanced.

Subjects in each experimental condition watched two short videos: one about a victim of domestic violence, and the other a disabled war veteran who suffered from the lack of necessary benefits. To be able to control for the potential effects of the video order on the outcome variables—if there were such effects—I counterbalanced the order in which the two videos were presented within each condition. As in Study 1, two chronic problems—each portrayed by a video—were used in Study 2 to reduce the influences of the idiosyncrasies of one particular problem on the findings. Given that the effects of the two problems on the outcome variables are of little theoretical interest and that I do not expect the impact of the two factors (i.e., a victim’s overt emotional expressions and camera perspectives) on the outcome variables to be different by problem, the rest of this thesis focuses on the effects of the two factors.

Material. Two criteria were used to select the videos used in this study. First, the video must allow me to manipulate the overt emotional expressions of a victim without changing the information about the victim. In other words, the part of the video that displayed the emotional expressions should contain no additional information about the victim, so that I could cut off the emotional expression part without altering the information about the victim. Second, most shots of the victim must be from medium camera perspectives, so that I could create close-ups of the victim by zooming in on his or her face without severely undermining the quality of the images. Based upon these criteria, I selected three videos as candidates for a pilot study. One video portrayed a woman (Joyce) who had been stalked and harassed by her ex-husband (taken from the film *Domestic Violence*). A second video depicted a single mother (Mary) who struggled to raise three children on minimum wage (from *Waging a living*). A third video was about a disabled war veteran (Wayne) who suffered as a result of the lack of necessary benefits (from *Off to war: From rural Arkansas to Iraq*). Each video was, then, edited to make the storyline more compact so that it was about 2-3 minutes long.

Before manipulating overt emotional expressions and camera perspectives, I conducted a pilot study (using the three shortened videos) to test victim likeability and problem attribution (i.e., whether the problem is under the victim's control). This was because victim likeability and problem attribution can moderate participants' empathic

responses (Betancourt, 1990; Schmidt & Weiner, 1988; Weiner, 1980; Zillmann, 2006).

The goal of the pilot study was to ensure that the two videos used in Study 2 were comparable on these two dimensions.⁸

The pilot study was conducted on-line through SurveyGizmo—a software tool for on-line surveys—among a convenience sample of 36 adults. The subjects were recruited using a snowball sampling technique and randomly assigned to one of three video sequences that were created to counterbalance the order in which the videos were presented.⁹ During the study, each participant completed three sets of questions—one after each video—to evaluate the videos in terms of victim likeability (rated on a 9-point scale; for Joyce, $M = 6.61$; $SD = 1.39$; for Mary, $M = 6.13$; $SD = 1.47$; for Wayne, $M = 6.61$; $SD = 1.35$) and problem attribution (for Joyce, $M = 2.56$; $SD = 1.13$; for Mary, $M = 3.63$; $SD = 1.17$; for Wayne, $M = 2.61$; $SD = 1.34$).¹⁰

⁸ Study 2 was also designed to test the effects of fiction versus non-fiction labels (as a within-subject factor) on the outcome variables. For this reason, it was of great importance to ascertain that the two videos used in the study were as comparable as possible in terms of victim likeability and problem attribution.

⁹ The three sequences were: 1) Mary (the single mother)-Joyce (the abused woman)-Wayne (the disabled war veteran); 2) Joyce-Wayne-Mary; 3) Wayne-Mary-Joyce. The results of analysis of variance for repeated measures did not show significant effects of the video order on victim likeability and problem attribution.

¹⁰ Problem attribution was measured by the following three items: 1) [Victim name] was responsible for what s/he was going through; 2) you cannot blame [Victim name] for what s/he was going through; and 3) [Victim name] brought on himself/herself what s/he was going through by the choices s/he made. Each statement was rated on a 7-

Analyses of variance for repeated measures were conducted to compare victim likeability and problem attribution across the three videos. The results showed a marginally significant difference between the videos in victim likeability ($F(2, 70) = 2.82; p = .07$). Post hoc analyses indicated that the single mother (Mary) was perceived to be less likeable than the abused woman (Joyce; $p = .048$) and the disabled war veteran (Wayne; $p = .075$). There was no significant difference between Joyce and Wayne in terms of likeability, however. Moreover, there was a significant difference between the videos in problem attribution ($F(1.70, 59.73) = 16.01; p < .001$).¹¹ Post hoc analyses suggested that the video about Mary induced more internal attribution (i.e. blaming the victim for the problem) than the videos about Joyce ($p < .001$) and Wayne ($p < .001$). Again, there was no significant difference between the latter two videos in terms of internal attribution. Based upon the results of the pilot study, the videos about Joyce (the abused woman) and Wayne (the disabled veteran) were chosen for study 2.

To vary camera perspectives, I created close-up perspectives by zooming in on the parts of each video that captured the victim's face from medium perspectives. To be

point agree-disagree scale with 1 indicating "strongly disagree" and 7 "strongly agree." The 2nd item was reverse coded, so that for all three items higher scores indicated more blame for the victim. I then created a problem attribution index for each victim by averaging each subject's scores on the three items. The reliability coefficient for the index was above .79 for all three victims.

¹¹ The assumption of Sphericity was violated, so Greenhouse-Geisser correction was applied.

clear, when changing to facial close-ups of the victim, the video did not show the process of the face becoming closer. Rather, it cut to the close-ups directly. Though it was impossible to use close-up shots throughout the videos, a considerable portion (about 60%) of the footage presented in the close-up conditions framed the victims in close-ups. Given that structural features of a video such as the number of cuts and edits can influence viewers' orienting responses that feature higher levels of arousal (Lang, Zhou, Schwartz, Bolls, & Potter, 2000), and that viewers' emotional arousal was one of the outcome variable examined in this study, I changed camera perspectives without altering the number of cuts and edits in the videos.¹²

After this, I created no-emotional-expression version of each video by cutting the emotional expression section of the video. As a result, four versions of the video on each topic were created, including a victim with or without overt emotional expressions that was captured from close-up or medium camera perspectives.

Finally, it is necessary to establish baseline measures of subjects' psychophysiological responses because knowing them helps to control for dramatic individual differences in these responses when comparing the responses across individuals. To capture the baseline measures, two short clips—30 second each

¹² A cut refers to a change from one visual scene to a completely new visual scene within a coherent message, and an edit is defined as a change of camera shots within the same visual scene (Lang et al., 2000).

showing three pictures of still objects (e.g., a spoon, a table, and a lamp) with 10 seconds for each picture—were created and attached to the beginning of the two videos, respectively. Showing subjects these pictures allowed me to collect 30 second baseline measures of their skin conductance levels (as an indicator of levels of emotional arousal). To be clear, these pictures were selected to correspond with the images—in the International Affective Picture System (IAPS)—that elicit a neutral emotional state (NIMH Center for the Study of Emotion & Attention, 2009).¹³

Participants. One hundred and eighty one subjects from the Philadelphia area were recruited via Craigslist—an on-line website for classifieds—to participate in this study. They received a \$30 incentive upon completing the study. Four cases were excluded from the analyses because subjects fell asleep while watching the videos. Another case was eliminated due to a network crash in the middle of the study. The remaining 176 subjects had a mean age of 31.54 ($SD = 11.44$). Thirty-seven percent of them were male and 63% were female. In terms of race, the majority of participants were white Americans (63%), followed by African Americans (27%) and Asian Americans (3%). The rest of participants (7%) were mixed race or other.

Setting and procedure. The study was conducted in a laboratory located on the second floor of the Annenberg School for Communication at the University of

¹³ The information was retrieved from the center's website (<http://csea.phhp.ufl.edu/>).

Pennsylvania. The room was divided into two sections by a screen—one for study participants and the other for experimenters. The participant section had a comfortable couch; on a TV stand in front of the couch was a television set with a large screen. By receiving input from one of the computers located in the experimenter section, the television was used to show questionnaires and videos. The equipment for collecting psychophysiological data (Biograph Infiniti 3.0) was placed on a chair behind the couch. The experimenter section had two computers: one (connected to the television) for displaying questionnaires and videos, and recording answers to the questionnaires; and the other for collecting psychophysiological data. During a study session, a participant sat on the couch, answering questions and watching videos, while the researcher stayed in the experimenter section.

Given that the presence of another person nearby can alter one's psychophysiological responses (e.g., the levels of emotional arousal), the researcher met one subject at a time. Upon arrival at the laboratory, the subject was instructed to sit down on the couch, read a consent form—which included information about the study procedure and potential risk associated with the study—and sign it if s/he agreed to participate. All the subjects were told that the study was about their reactions to stories about real people and/or fictional characters.

After acquiring the signed consent form and answering the questions that the subject had about the study, the researcher cleaned (with alcohol pads) and dried (with paper towel) the subject's forehead. She then attached three sensors to corrugator supercilii muscle (see Fridlund & Cacioppo, 1986 for details about sensor placement) to measure the subject's brow activity (as an indicator of his or her imitating the victim's crying). The practice is common in studies of people's facial expressions in response to stimuli (e.g., Duclos et al., 1989; Lundqvist, 1995).

To measure emotional arousal, skin conductance level (SCL) data were collected by attaching two sensors to the fingers on the non-dominant hand of the subject—one to the tip of the index finger and the other to the tip of the middle finger—after the fingers were cleaned with distilled water and dried. The SCL is an indicator of sympathetic activation (Hopkins & Fletcher, 1994) and has been widely used in studies of emotional responses to media stimuli (e.g., Lang, 2000; Reeves & Nass, 1996). After all the sensors were in place, the researcher placed a wireless mouse and a lap desk on the lap of the subject so that s/he could use them to answer questions on the screen later. She then instructed the subject to be relaxed and rest his or her fingers during the study. Finally, the data collection equipment was turned on, and the researcher checked whether the sensors were attached appropriately and recorded data fell into a normal range before showing the subject the pre-test.

After randomly assigned to one of five conditions—four experimental conditions and one control condition—all the subjects completed a questionnaire, including measures of demographics (i.e. age, gender, race and income) and two individual difference variables (namely, empathy as a trait and beliefs in humanitarianism) that can influence the outcome variables under study (see Appendix C for question wording). No psychophysiological data were collected while they were answering these questions and during the two posttests.

Subjects in the experimental conditions then watched the two videos selected based upon the results of the pilot study: one about an abused woman (Joyce) and the other a disabled war veteran (Wayne). Before playing each video, the researcher instructed the subjects not to move while watching the video. Brow activity and SCL were recorded at a rate of 256 times per second when they were watching the videos—each including a 30-second display of the pictures of still objects and footage about either Joyce or Wayne. After viewing each video, they answered a series of questions measuring empathic concern, perspective taking, attitudes toward the interventions that benefited the victim group (i.e., abused women or disabled war veterans), and intentions to offer personal aid to the group. Given that asking the subjects to help two victim

groups in a row may reduce their willingness to help the second group, only the first posttest included the helping-intention questions.¹⁴

Subjects in the control condition, however, watched two short clips from the television show *Sex and the City* which contained no information that may influence the outcome variables of interest. Although sensors were attached to them to make their experience similar to that of the subjects in the experimental groups, no psychophysiological data were collected from them. After watching each clip, the subjects in the control condition answered the same questions about their attitudes toward the interventions and helping intentions as the subjects in the experimental conditions. No questions about empathic concern or perspective taking were asked in the control condition because they tapped subjects' reactions to the victims portrayed in the videos and did not make sense to those who did not watch the videos. To be clear, each posttest in the control condition was about one issue (domestic violence or the lack of necessary benefits for disabled war veterans). The order in which the two posttests

¹⁴ There were no manipulation check questions in the posttests. This is because no matter whether subjects recognized the manipulations or not, the videos did differ across experimental conditions in terms of the presence/absence of the victim's overt emotional expressions and the camera perspectives used to frame the victim (see O'Keefe, 2003 for more explanations). Moreover, the subjects did not necessarily need to be aware of these differences in order to be affected by them.

were presented was counterbalanced, and only the first posttest asked the helping-intention questions.

After completing the second posttests, all the subjects—regardless of which condition they were in—were debriefed about the purpose of the study. They then filled out a payment form, received the \$30 incentive, and left.

Measures. Given that the purpose of using two chronic problems in Study 2 was to make sure that the findings were not specific to one particular problem, and that I did not expect the effects of the victim's overt emotional expressions and the camera perspectives used to frame the victim on the outcome variables to be different by problem, I pooled the data from the two posttests (each on one problem). Before pooling the data, I checked the potential impact of the video order on the outcome variables using analyses of variance for mixed design. The results did not show significant order effects. Hence, the data from the two posttests were pooled. Each subject's score for one particular variable was obtained by averaging his or her scores on the two posttests. For example, if a subject scored 6 on the empathic concern scale for Joyce and 5 on the same scale for Wayne, s/he got 5.5 on the empathic concern measure in the pooled data set. All the statistics presented in this section were based upon the pooled data.

Empathy as a personality trait refers to individual differences in the tendency to experience empathic concern. There is evidence that individuals' capacities for empathy affect how they emotionally react to an appeal for help (Davis, 1983) and to the images of animals harmed by nature (Sevillano, Aragones, & Schultz, 2007). For this reason, a measure of empathy as a trait was included in the pre-test of Study 2. In the study, empathy as a trait was captured by a sub-index of the Interpersonal Reactivity Index (Davis, 1980) that used eight items to capture individuals' tendency to experience empathic concern (see Appendix C for the test items used in Study 2). All the items were rated on 7-point agree-disagree scales with 1 indicating "strongly disagree" and 7 "strongly agree." I created a scale of empathic tendencies by averaging each subject's scores on the eight items ($M = 5.98$; $SD = .59$; *Cronbach's Alpha* = .72). The same method was used to construct scales for other variables in Study 2.¹⁵

Beliefs in humanitarianism taps individual differences in their beliefs that people should be concerned for the welfare of their fellow human beings and offer assistance to those in need (Feldman & Steenbergen, 2001; Steenbergen, 1995). People with strong beliefs in humanitarianism tend to have warm feelings toward people in need (e.g., the poor and the beneficiaries of welfare programs; Steenbergen, 1995), support social spending in safety-net programs (e.g., social security), and oppose reforms that limit the

¹⁵ Questions with reverse wording were reverse coded before I created scales.

access of needy people to welfare programs (Feldman & Steenbergen, 2001; Feldman & Zaller, 1992; Steenbergen, 1995). Moreover, humanitarianism is also considered a major motive for private and corporate donations to charitable organizations that help people in need (Boorstin, 1987; McCarthy, 1989).

Because of this, Study 2 assessed individual differences in their beliefs in humanitarianism via six items used in the pilot study of 1995 American National Election Studies (for the belief scale, $M = 5.62$; $SD = .75$; *Cronbach's Alpha* = .68). The measure captured to what extent subjects believed that people should be concerned about the well-being of others and help others in distress. For example, one item asked subjects to rate the statement "One should always find ways to help others less fortunate than oneself" on a 7-point agree-disagree scale. The measure has a respectable reliability (with a reliability of .80 using a national representative sample; Steenbergen, 1995) and validity. It was found to be positively associated with warm feelings toward people in plight and favorable attitudes toward social spending on the policies that benefit those in need (Steenbergen, 1995).

Empathic concern was measured by a scale similar to the one used in Study 1 ($M = 5.80$; $SD = 1.01$; *Cronbach's Alpha* = .92; see Appendix E for correlations among outcome variables of Study 2). Perspective taking (for the scale, $M = 4.81$; $SD = 1.03$;

Cronbach's Alpha = .83) and attitudes toward the interventions ($M = 5.71$; $SD = .70$; *Cronbach's Alpha* = .85) were also captured by items similar to the ones used in Study1.

Helping intentions were measured by two items that asked subjects to rate on 7-point scales to what extent they were willing to donate money or ask people they knew to make contributions to the charities that support the victim group (for the scale, $M = 4.82$; $SD = 1.30$; *Cronbach's Alpha* = .75).

Psychophysiological data reduction and analysis strategies. Given that only a very small portion of the footage (about 12%) in the emotional expression conditions showed the victims crying, an analysis of variance for mixed design (with the emotional expressions as a within-subject factor and camera perspectives as a between-subject factor) was used to test the effect of the emotional expressions on participants' brow activity (as an indicator of their imitating the crying). The purpose of the analysis was to compare brow activity levels between the non-emotional expression part and the emotional expression part of the videos within each participant. No cases in the non-emotional expression conditions were used in the analysis because participants in these conditions were not exposed to the overt emotional expressions of the victims. Eleven cases in the emotional expression conditions were eliminated due to either the sensor

falling off or subjects' movements.¹⁶ As a result, a total of 64 valid cases were included in the analysis.

Before estimating the impact of the victim's overt emotional expressions on participants' brow activity, raw data were transformed into two variables used in the analysis. I first averaged the brow activity levels for the non-emotional expression section of each video and, then, took the mean of the brow activity levels for the emotional expression section of each video. After this, I averaged the mean brow activity levels for the non-emotional expression sections of the two videos and the mean brow activity levels for the emotional expression sections of the videos, respectively. As a result, two variables were created: the mean brow activity level for the non-emotional expression sections of the videos ($M = 9.82\mu\text{volts}$; $SD = 5.52$) and the mean brow activity level for the emotional expressions sections of the videos ($M = 10.40\mu\text{volts}$; $SD = 6.34$).

To examine the effect of the victim's overt emotional expressions and camera perspectives on participants' SCL (as an indicator of their levels of emotional arousal), an analysis of variance for mixed design (with the emotional expressions as a within-subject factor and camera perspectives as a between-subject factor) was used. Again, because only 12% of the videos in the emotional expression conditions contained the

¹⁶ Some subjects sneezed and coughed a lot when watching the videos.

overt emotional expressions of the victims, a within-subject comparison was appropriate for testing the effect of the emotional expressions on SCL. A between-subject comparison was used to examine the effect of camera perspectives on SCL because a considerable portion (60%) of the footage in the close-up conditions framed the victims in close-ups. Like the analysis on participants' brow activity, the analysis on SCL used only cases in the emotional expression conditions. Nine cases in these conditions were eliminated because their SCL data showed a flat line (i.e., Maximum = Minimum).¹⁷ As a result, a total of 66 valid cases were included in the analysis.

To control for the influence of dramatic individual differences in emotional arousal on the outcome of my analysis, variables that assessed the deviation from the baseline measures were used in the analysis. To create these variables, I first took the mean of SCL for the baseline measures (recorded while subjects were watching the three pictures of still objects at the beginning of each video), the non-emotional expression section, and the emotional expression section of each video, respectively. Second, the change in the mean SCL for the non-emotional expression section of each video was calculated by subtracting the mean for the baseline measures from the mean for the non-emotional expression section of the video. Third, the deviation from the

¹⁷ The lack of variance occurred because sometimes subjects had very cold fingers so there was no sweat at all during the study; at other times, the sensor attachment was too tight, and, therefore, the sensors could not read the SCL accurately.

baseline measures for the emotional expression section of each video was calculated by subtracting the baseline mean from the mean for the emotional expression section of the video. Finally, I averaged the changes in the mean SCL for the non-emotional expression sections and the deviations in the mean SCL for the emotional expression sections of the two videos, respectively. This data reduction procedure resulted in two variables: change in the mean SCL (from the baseline) for the non-emotional expression sections of the videos ($M = -.44\mu\text{siemens}$; $SD = 5.14$) and change in the mean SCL for the emotional expressions sections of the videos ($M = -.33\mu\text{siemens}$; $SD = 5.97$).¹⁸

Analytical procedure for the survey data. To test the effects of victims' overt emotional expressions and camera perspectives on other outcome variables, I first used two-by-two full factorial analyses of variance to examine the effects of the two factors (i.e., the emotional expressions and camera perspectives) on empathic concern and perspective taking. I then re-tested these effects using analysis of covariance with empathy as a trait and beliefs in humanitarianism as covariates.¹⁹ If the initial analyses

¹⁸ The negative value suggested that SCL during exposure to the footage were lower than the baseline measures.

¹⁹ Correlation analyses indicated that the two individual difference variables were strongly positively associated with empathic concern, perspective taking and the attitudes toward the interventions ($r > .30$) but were not strongly related to helping intentions. Moreover, the two variables were not related to the two factors manipulated here. For this reason, the analyses of covariance with the two variables as covariates

showed the expected effect of the factor(s) on empathic concern, then further analyses were conducted to examine the effects of the factor(s) on attitudes toward the interventions and helping intentions, using analysis of variance and (if appropriate) analysis of covariance. If the analyses found the predicted effects of the factor(s) on the attitudes and/or helping intentions, then a series of OLS regression models were estimated to test the mediating role of empathic concern in the observed relationships. Finally, I examined the effects of seeing the videos about the victims on participants' attitudes and behavior. To do so, independent t tests were conducted to investigate whether subjects in the experimental conditions, on average, expressed more favorable attitudes toward the interventions and/or were more willing to offer personal aid to the victims than subjects in the control condition.

were conducted to test the effects of the two factors on empathic concern, perspective taking, and the attitudes toward the interventions.

Chapter 5. Findings: The Effects of Geographic Proximity and Sensory Proximity

Study 1 examined how the geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience) of a victim of a chronic problem influence empathic concern, perspective taking, attitudes toward the interventions that benefit the victim group, and personal helping behavior to the group, on the part of the audience. The rest of this chapter presents the findings of the study.

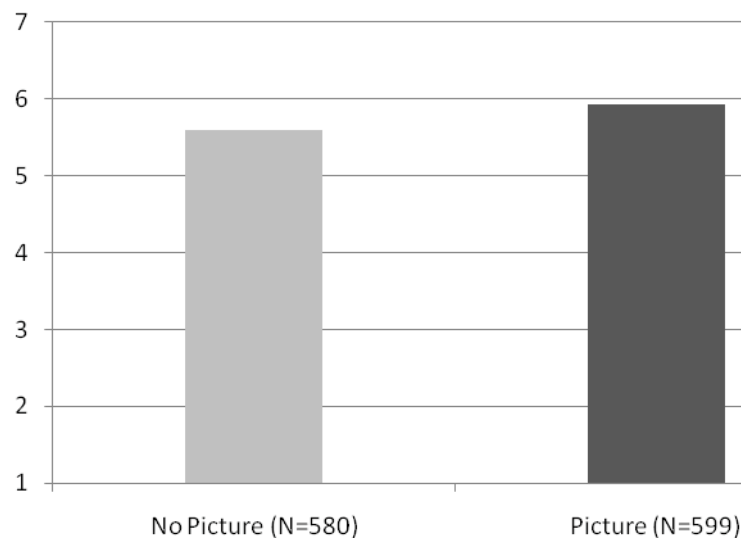
Empathic Concern and Perspective taking

Starting with the effect of the geographic proximity of a victim on empathic concern, an analysis of variance showed that a media portrayal of a nearby victim did not arouse greater empathic concern than that of a distant victim, a finding that was inconsistent with my expectation of a positive effect of the geographic proximity on empathic concern (H3b). Hence, the data did not support the notion that people will show greater empathic concern for a nearby victim than for a distant victim.

Next focusing on the effects of a picture of the suffering experience of a victim, the analysis indicated that reading a story about the victim with the picture induced higher levels of empathic concern ($M = 5.92$; $SE = .05$) than reading the same story

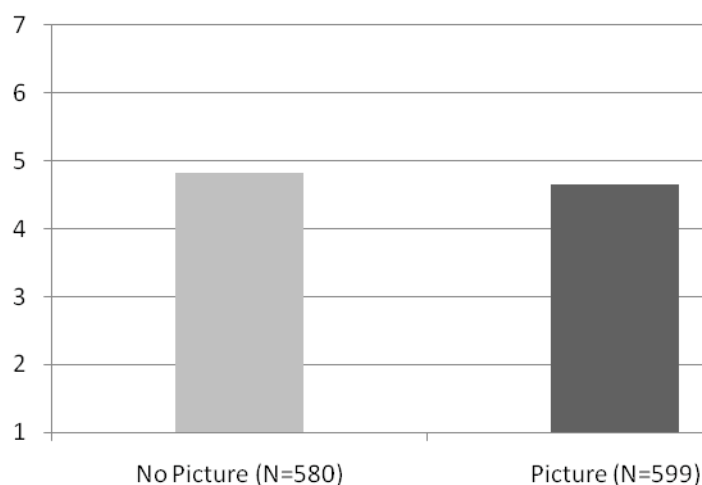
without the picture ($M = 5.6$; $SE = .05$; $F(1, 1171) = 19.97$; $p < .001$; as shown in Figure 5-1); this finding confirmed the predicted positive effect of the picture on empathic concern (H3c). Moreover, as anticipated, exposure to the picture reduced the likelihood of subjects viewing the situation from the victim's perspective (for the picture conditions, $M = 4.66$; $SE = .05$; for the non-picture conditions, $M = 4.82$; $SE = .05$; $F(1, 1171) = 5.22$; $p < .05$; see Figure 5-2). In other words, subjects who saw the picture were less likely than those who did not see the picture to imagine what it was like to be in the victim's situation, a finding that was in line with my prediction of the inhibiting effect of the picture on perspective taking (H4a).

Figure 5-1. The Effect of Exposure to a Picture of the Suffering Experience of a Victim on Empathic Concern (Study 1)



Note. Based on an analysis of variance, seeing the picture had a significant positive effect on empathic concern ($F(1, 1171) = 19.97$; $p < .001$).

Figure 5-2. The Effect of Exposure to a Picture of the Suffering Experience of a Victim on Perspective Taking (Study 1)



Note. Based on an analysis of variance, seeing the picture had a significant negative effect on perspective taking ($F(1, 1171) = 5.22; p < .05$).

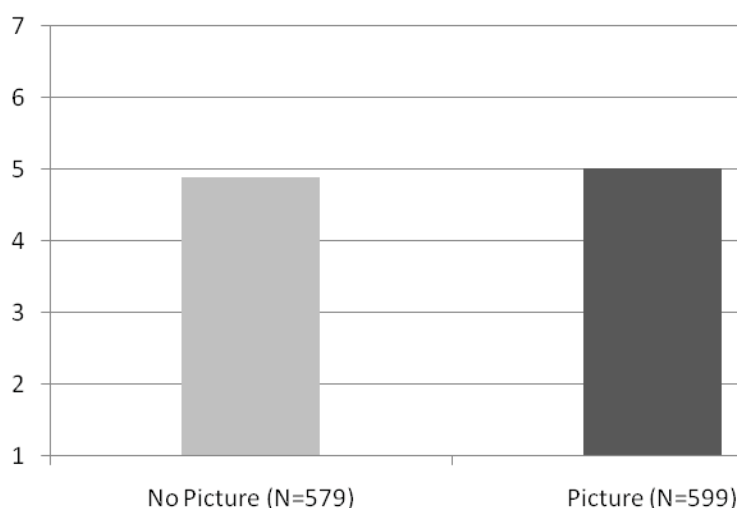
Even though my initial analysis did not find the predicted negative effect of the geographic distance (between the victim and the subjects) on empathic concern, the negative effect may still show up under certain conditions because I expected the negative effect to be more evident when the picture of the victim's suffering is absent than when the picture is present (H3d). Hence, I proceeded to examine the interaction of the geographic proximity and the picture on empathic concern. The analysis, however, did not show a significant finding, so I did not find evidence to support the anticipated interaction of the geographic distance and the picture on empathic concern.

Attitudes toward the Interventions

Thus far, my analyses indicated that a picture of the suffering experience of a victim had a positive effect on empathic concern but a negative effect on perspective taking. The analyses, however, did not show the expected positive effect of the geographic proximity or the predicted interaction of the geographic proximity and the picture on empathic concern. Given that the geographic proximity and the geographic proximity X the picture were expected to influence subjects' attitudes toward the interventions (that benefited the victim group) through changing the levels of empathic concern felt for the victim, no further analyses were conducted to test the impact of the geographic proximity or the geographic proximity X the picture on the attitudes. Study 1, thus, did not find evidence to support the notion that if the geographic proximity of a victim has a positive effect on empathic concern, then a nearby victim will elicit more favorable attitudes toward the interventions than a distant victim (H5b), nor did it confirm the prediction that if the expected negative effect of the geographic distance (between the victim and the audience) on empathic concern is more evident when the picture of the victim's suffering is absent than when the picture is present, then a similar interaction effect of the geographic distance and the picture will occur for attitudes toward the interventions (H5d).

As for the effect of a picture of a suffering victim on attitudes toward the interventions, an analysis of variance showed that seeing the picture elicited greater support for the interventions ($M = 5.01$; $SE = .04$) than not seeing it ($M = 4.89$; $SE = .04$; $F(1, 1170) = 4.76$; $p < .05$; see Figure 5-3), a finding that corroborated the expected positive effect of exposure to the picture on the audience's attitudes (H5c).

Figure 5-3. The Effect of Exposure to a Picture of the Suffering Experience of a Victim on Attitudes toward the Interventions (Study 1)

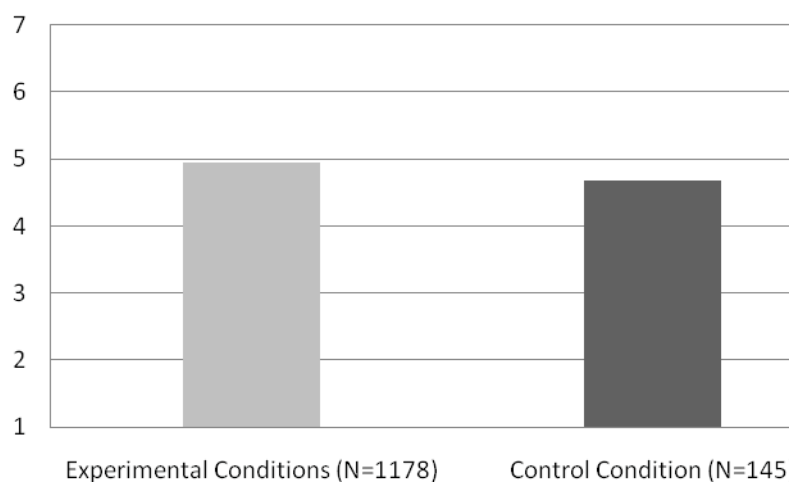


Note. An analysis of variance indicated a positive effect of seeing the picture on attitudes toward the interventions ($F(1, 1170) = 4.76$; $p < .05$).

When it comes to the effect of reading a story about a victim on attitudes toward the intervention, an independent t test showed that subjects in the experimental conditions, on average, had more favorable attitudes toward the intervention ($M = 4.95$; $SE = .03$) than those in the control condition ($M = 4.68$; $SE = .07$; $t = 3.41$; $df = 1321$; p

= .001; see Figure 5-4). The finding suggests that reading the story had a positive effect on participants' attitudes.

Figure 5-4. The Effect of Reading a Story about a Victim on Attitudes toward the Interventions (Study 1)



Note. An independent t test indicated that reading a story about a victim had a positive effect on attitudes toward the interventions ($t=3.41$; $df=1321$; $p=.001$).

Actual Helping Behavior and Helping Intentions

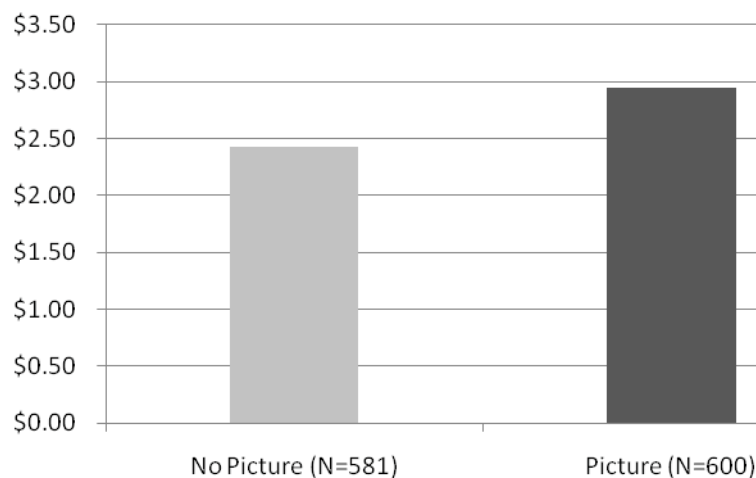
As before, given that the geographic proximity and the interaction of the geographic proximity and the picture were expected to influence people's helping behavior and helping intentions through changing the levels of empathic concern felt for the victim, and that my analyses did not find the predicted effect of the geographic proximity or the geographic proximity X the picture on empathic concern, no further analyses were conducted to examine their influences on actual helping behavior or helping intentions. Hence, Study 1 did not find evidence to corroborate the prediction

that if the geographic proximity of a victim has a positive effect on empathic concern, then a nearby victim will elicit more private aid for the victim group than a distant victim (H6b), nor did it support the hypothesis that if the expected negative effect of the geographic distance (between the victim and the audience) on empathic concern is more evident when a picture of the suffering experience of the victim is absent than when the picture is present, then a similar interaction effect of the geographic distance and the picture will result in personal aid for the victim group (H6d).

However, as anticipated, relative to not seeing the picture of a suffering victim (for the amount of money donated, $M = \$2.43$; $SE = .24$; for willingness to ask others to donate, $M = 3.60$; $SE = .06$), seeing the picture motivated participants to contribute more ($M = \$2.95$; $SE = .23$; $F(1, 1173) = 2.39$; $p = .06$, one-tailed test; see Figure 5-5) and made them more willing to ask others they knew to donate ($M = 3.78$; $SE = .06$; $F(1, 1166) = 4.30$; $p < .05$; see Figure 5-6) to the charitable organization that helped the victim group. The findings lent support to the expected positive effect of the picture on private helping behavior (H6c).²⁰

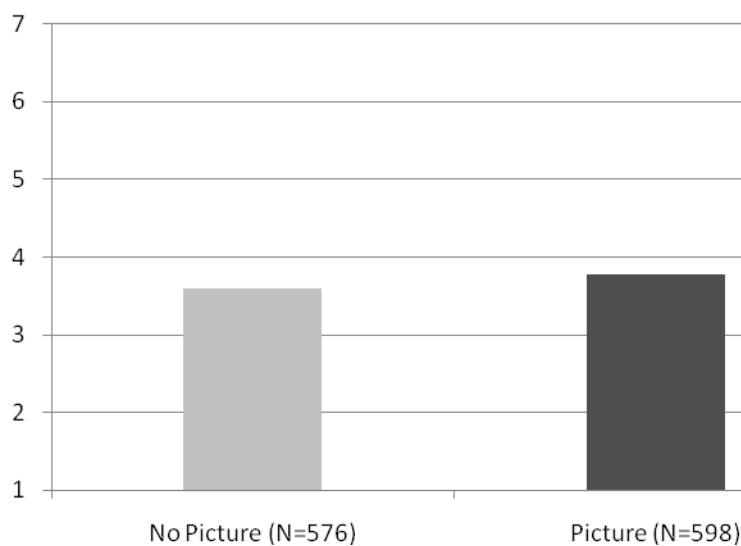
²⁰ An F-test used to compare two means is equivalent to a t test, so the F test can be one-tailed if it is used to test a directional hypothesis (Snedecor & Cochran, 1989). Given that I proposed a directional hypothesis about the effect of the picture on private helping behavior, one-tailed test was justified.

Figure 5-5. The Effect of Exposure to a Picture of the Suffering Experience of a Victim on the Amount of Money Donated (Study 1)



Note. An analysis of variance showed that seeing the picture had a marginally significant positive effect on the amount of money donated ($F(1, 1173) = 2.39$; $p = .06$; one-tailed test).

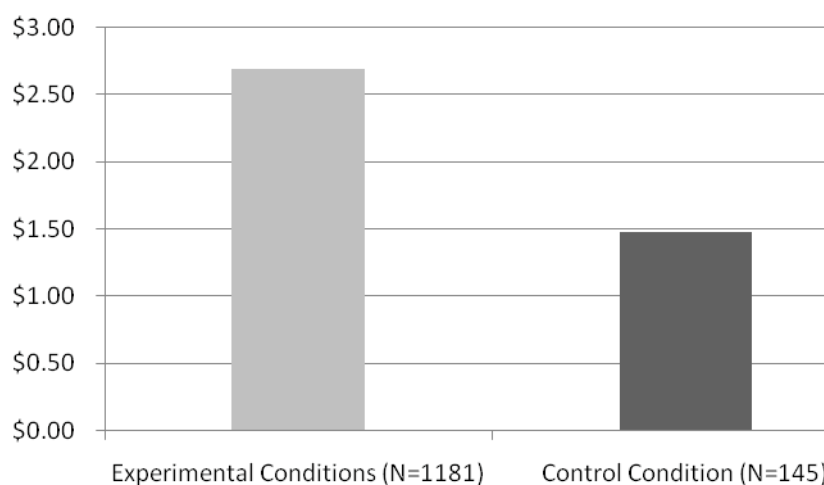
Figure 5-6. The Effect of Exposure to a Picture of the Suffering Experience of a Victim on Willingness to Ask Others to Donate (Study 1)



Note. Based upon an analysis of variance, seeing the picture had a positive effect on willingness to ask others to donate ($F(1, 1166) = 4.30$; $p < .05$).

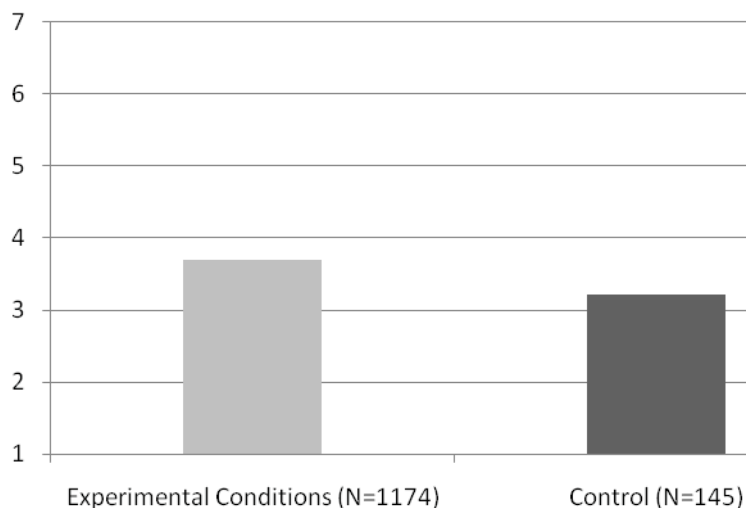
Turning to the effect of reading a story about a victim on personal helping behavior, independent *t* tests indicated that compared to subjects in the control condition (for the amount of money donated, $M = \$1.48$; $SE = 2.97$; for willingness to ask others to donate, $M = 3.21$; $SE = 1.37$), those in the experimental conditions, on average, donated more money ($M = \$2.69$; $SE = 5.71$; $t = 2.52$; $df = 1324$; $p < .05$; see Figure 5-7) and were more willing to ask people they knew to make donations ($M = 3.69$; $SE = 1.53$; $t = 3.62$; $df = 1317$; $p < .001$; see Figure 5-8). The findings suggest that reading the story about the victim had a positive effect on personal helping behavior.

Figure 5-7. The Effect of Reading a Story about a Victim on the Amount of Money Donated (Study 1)



Note. An independent *t* test showed that reading a story about a victim had a positive effect on the amount of money donated ($t = 2.52$; $df = 1324$; $p < .05$).

Figure 5-8. The Effect of Reading a Story about a Victim on Willingness to Ask Others to Donate (Study 1)



Note. An independent t test showed that reading a story about a victim increased willingness to ask others to donate ($t = 3.62$; $df = 1317$; $p < .001$).

The Mediating Role of Empathic Concern

Given that I found the expected positive effects of exposure to a picture of a victim's suffering on attitudes toward the interventions, helping intentions and actual helping behavior, a logical next step was to examine to what extent the observed effects were (partly) explained by empathic concern felt for the victim.²¹ To test the mediating

²¹ No analyses were conducted to examine the mediating role that empathic concern played in the relationships between the geographic proximity and the geographic proximity X the picture, on one hand, and participants' attitudes and behavior, on the other hand, because my analyses did not find the expected effect of the geographic proximity and the geographic proximity X the picture on empathic concern, in the first place. Hence, it is reasonable to conclude that Study 1 did not find evidence to support the predictions that the anticipated effects of the geographic proximity (H7b-H8b) and

role of empathic concern in each observed relationship, three OLS regression models were estimated. The first model examined the effect of exposure to the picture (the independent variable) on empathic concern (the mediator) while including the geographic proximity and chronic problems as predictors. The second model tested the impact of seeing the picture (the independent variable) on the outcome variable (i.e., attitudes toward the interventions, helping intentions or actual helping behavior) with the geographic proximity and the problems as predictors. The third model estimated the effect of exposure to the picture (the independent variable) and empathic concern (the mediator) on the outcome variable with the geographic proximity and the problems as predictors (see Baron & Kenny, 1986 for justification).

To establish that empathic concern mediated the positive effect of seeing the picture on the outcome variable, it is necessary to show that 1) exposure to the picture had a positive effect on empathic concern; 2) seeing the picture also had a positive effect on the outcome variable; and 3) when both exposure to the picture and empathic concern were included in the model, empathic concern had a positive effect on the outcome variable, and, at the same time, the effect of seeing the picture on the outcome variable vanished or became smaller than without empathic concern in the model.

the geographic proximity X the picture (H7d-H8d) on attitudes toward the interventions and personal helping behavior are mediated by empathic concern felt for the victim.

As shown in Table 5-1 to Table 5-3, seeing the picture had (marginally) significant positive effects on empathic concern (see Model 1 in the tables) and the outcome variable (i.e., attitudes toward the interventions, the amount of money donated, or willingness to ask others to donate; see Model 2 in the tables). When both seeing the picture and empathic concern were included in the model, empathic concern had a significant positive effect on the outcome variable, but the effect of exposure to the picture was no longer significant (see Model 3 in the tables). More importantly, the magnitude of the direct effect of seeing the picture on the outcome variable was reduced with empathic concern in the model. To be specific, the direct effect of the picture on the attitudes was reduced to one tenth of its original size; the direct effects of the picture on the amount of money donated and willingness to ask others to donate were reduced to less than half of its original size. Hence, I found evidence to support the notion that empathic concern induced for one victim mediates the influence of seeing a picture of a suffering victim on people's attitudes (H7c) and helping behavior (measured by helping intentions and actual donation behavior; H8c).

Table 5-1: The Mediating Role of Empathic Concern in the Relationship between Seeing a Picture of a Victim's Suffering and Attitudes toward the Interventions (Study1)

	Empathic concern (Model 1)	Attitudes toward the interventions (Model 2)	Attitudes toward the interventions (Model 3)
Empathic concern	--	--	.33**(.02)
Victim's picture	.32**(.07)	.12*(.05)	.01(.05)
<i>Control variables</i>			
Geographic closeness	.01(.07)	.01(.05)	.01(.05)
Chronic Problems (1 for domestic violence; 0 for hunger among children	.02(.07)	.22**(.05)	.21**(.05)
Constant	5.58** (.07)	4.78**(.05)	2.92**(.12)
R^2	.02	.02	.21
N	1178	1177	1177

Note. ** $p < .01$; * $p < .05$; table entries are OLS regression coefficients; standard errors are in parentheses.

Table 5-2: The Mediating Role of Empathic Concern in the Relationship between Seeing a Picture of a Victim's Suffering and the Amount of Money Donated (Study 1)

	Empathic concern (Model 1)	The amount of money donated (Model 2)	The amount of money donated (Model 3)
Empathic concern	--	--	.85**(.13)
Victim's picture	.32**(.07)	.52#(.33)	.24(.33)
<i>Control variables</i>			
Geographic closeness	.01(.07)	-.05(.33)	-.04(.33)
Chronic Problems (1 for domestic violence; 0 for hunger among children	.02(.07)	-.36(.33)	-.38(.33)
Constant	5.58** (.07)	2.63**(.33)	-2.12*(.81)
R^2	.02	.003	.04
N	1178	1180	1178

Note. ** $p < .01$; * $p < .05$; # $p < .10$ (one-tailed test); table entries are OLS regression coefficients; standard errors are in parentheses.

Table 5-3: The Mediating Role of Empathic Concern in the Relationship between Seeing a Picture of a Victim's Suffering and Willingness to Ask Others to Donate (Study 1)

	Empathic concern (Model 1)	Willingness to ask others to donate (Model 2)	Willingness to ask others to donate (Model 3)
Empathic concern	--	--	.32**(.04)
Victim's picture	.32**(.07)	.18*(.09)	.08(.09)
<i>Control variables</i>			
Geographic closeness	.01(.07)	.01(.09)	.01(.09)
Chronic Problems (1 for domestic violence; 0 for hunger among children	.02(.07)	.52**(.09)	.51**(.09)
Constant	5.58** (.07)	3.33**(.09)	1.57**(.21)
R^2	.02	.03	.10
N	1178	1173	1172

Note. ** $p < .01$; * $p < .05$; table entries are OLS regression coefficients; standard errors are in parentheses.

In sum, Study 1 tested the effects of the geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience) of a victim of a chronic problem on the audience's empathic concern, perspective taking, attitudes toward the interventions that benefited the victim group, and private helping behavior to the group. As predicted, seeing the picture evoked greater empathic concern among subjects; the induced empathic concern, in turn, elicited support for the interventions and helping behavior. Moreover, seeing the picture had an anticipated negative effect on perspective taking. Contrary to my expectations, however, there was no evidence to

support the expected effects of the geographic proximity or the predicted interaction of the geographic proximity and the picture on the outcome variables. Finally, my analyses showed that reading a story about a victim produced more favorable attitudes toward the interventions and more private helping behavior than not reading the story.

Chapter 6: Findings: The Effects of Overt Emotional Expressions and Sensory Proximity

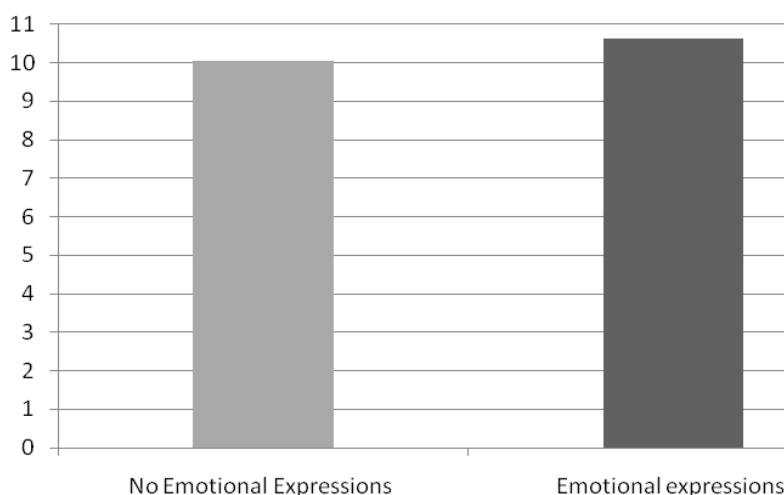
After confirming the expected positive effects of exposure to a picture of the suffering experience of a victim on empathic concern, attitudes toward the interventions that benefit the victim group, and personal helping behavior to the group in Study 1, I proceeded to explore what aspects of the visual representation may further intensify viewers' empathic reactions and increase their willingness to offer humanitarian aid to the group in Study 2. Specifically, Study 2 examined the effects of the overt emotional expressions and sensory proximity (manifested via facial close-ups of a victim) of a victim on the outcome variables identical to those examined in Study 1 except that Study 2 also tested the effects of the two factors on the audience's psychophysiological responses. The rest of this chapter presents the findings of the study.

Brow Activity and Emotional Arousal

To examine the effect of the overt emotional expressions of a victim (that is, crying in the case of this study) on subjects' brow activity (an indicator of their imitating the negative emotional expressions of the victim), an analysis of variance for mixed design (with the emotional expressions as a within-subject factor and camera

perspectives as a between-subject factor) was conducted. The result showed that exposure to the victim's crying increased the levels of brow activity among subjects (during exposure to the emotional expressions, $M = 10.62\mu\text{volts}$; $SE = .80$; during exposure to the non-emotional expression sections of the video, $M = 10.04\mu\text{volts}$; $SE = .69$; $F(1, 62) = 2.48$; $p = .06$; one-tailed test, see Figure 6-1).²² The finding was consistent with the prediction that, compared to not seeing the victim's overt emotional expressions, seeing them will induce higher levels of brow activity (H1a).

Figure 6-1. The Effect of the Overt Emotional Expressions of a Victim on Brow Activity (Study 2)

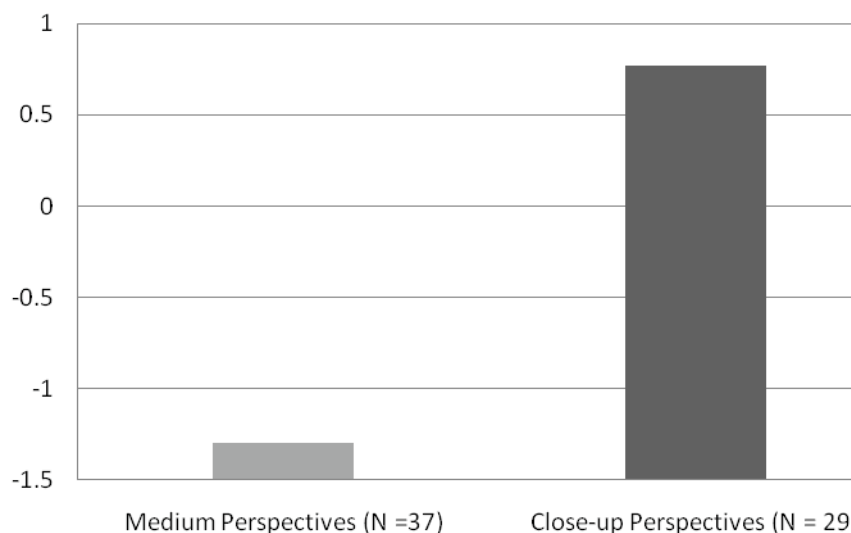


Note. Based on an analysis of variance for mixed design, there was a marginal significant positive effect of a victim's overt emotional expressions on subjects' brow activity ($F(1, 62) = 2.48$; $p = .06$; one-tailed test).

²² One-tailed test was justified because I proposed a directional hypothesis regarding the effect of a victim's overt emotional expressions on subjects' brow activity.

With respect to the effect of the victim's overt emotional expressions and camera perspectives on emotional arousal (indicated by change in the mean SCL from the baseline measures), an analysis of variance for mixed design (with the emotional expressions as a within-subject factor and camera perspectives as a between-subject factor) showed that portraying the victim from close-up camera perspectives ($M = .77\mu\text{siemens}$; $SE = .99$) induced a greater change in mean SCL (from the baseline) than capturing him or her from medium perspectives ($M = -1.3\mu\text{siemens}$; $SE = .88$; $F(1, 64) = 2.45$; $p = .06$; one-tailed test; see Figure 6-2). Given that greater increment in mean SCL from the baseline indicates higher levels of emotional arousal, the finding supported the expected positive effect of close-up camera perspectives on emotional arousal (H2b).

Figure 6-2. The Effect of the Camera Perspectives Used to Frame a Victim on Skin Conductance Levels (Study 2)



Note. Based on an analysis of variance for mixed design, there was a marginal significant positive effect of close-up camera perspectives on subjects' skin conductance levels ($F(1, 64) = 2.45; p = .06$; one-tailed test).

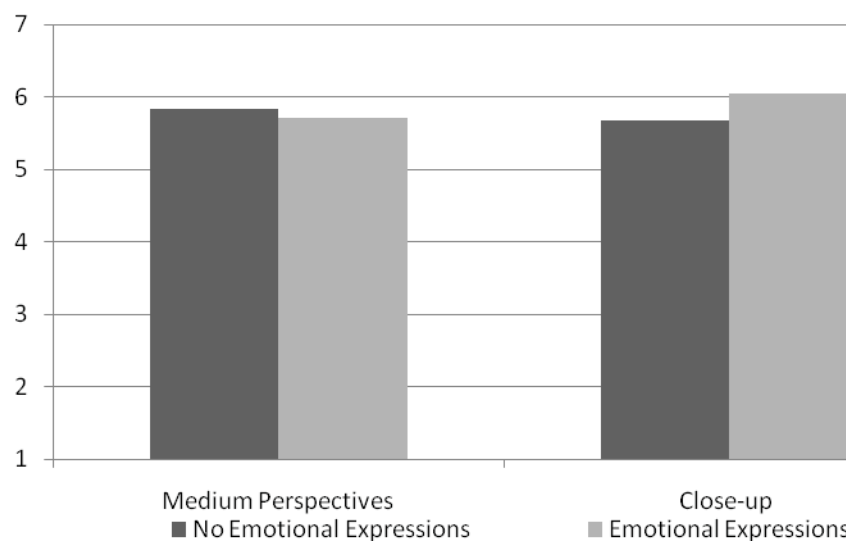
However, the analysis did not show a significant positive effect of the victim's overt emotional expressions on the change in mean SCL (from the baseline), nor did the analysis demonstrate a significant interaction between the emotional expressions and the camera perspectives on the change in mean SCL. Hence, I did not find evidence to support the expected positive effect of the victim's overt emotional expressions on emotional arousal (H2a) or to corroborate the idea that the predicted positive effect of the emotional expressions on emotional arousal will be more evident when the victim is framed in close-ups than when s/he is captured from medium perspectives (H2c).

Empathic Concern

When it comes to the effect of the victim's overt emotional expressions and camera perspectives on empathic concern, an analysis of variance did not find significant main effect of the two factors, even though the differences between the means were in the expected direction (for the emotional expression conditions, $M = 5.85$; for the non-emotional expression conditions, $M = 5.75$; for the close-up conditions $M = 5.83$; for the medium perspective conditions, $M = 5.77$). The analysis, however, showed a marginally significant interaction of the emotional expressions and camera perspectives on empathic concern ($F(1, 155) = 2.40$; $p = .06$; one-tailed test; see Figure 6-3). Follow-up analyses indicated that the interaction effect was mainly driven by the positive effect of the emotional expressions on empathic concern when the victim was captured in close-ups (for the emotional expression condition, $M = 6.05$; $SE = .09$; for the non-emotional expression condition; $M = 5.68$; $SE = 1.14$; $p = .06$; one-tailed test); no significant effect of the emotional expressions on empathic concern was found when the victim was portrayed from medium perspectives (for the emotional expression condition, $M = 5.71$; $SE = 1.05$; for the non-emotional expression condition; $M = 5.84$; $SE = .92$). The findings were consistent with my prediction that the expected positive effect of a victim's overt emotional expressions on empathic concern will be more

evident when the victim is captured by close-ups than when s/he is portrayed from medium camera perspectives (H3f).

Figure 6-3. The Interaction Effect of a Victim's Overt Emotional Expressions and Camera Perspectives on Empathic Concern (Study 2)

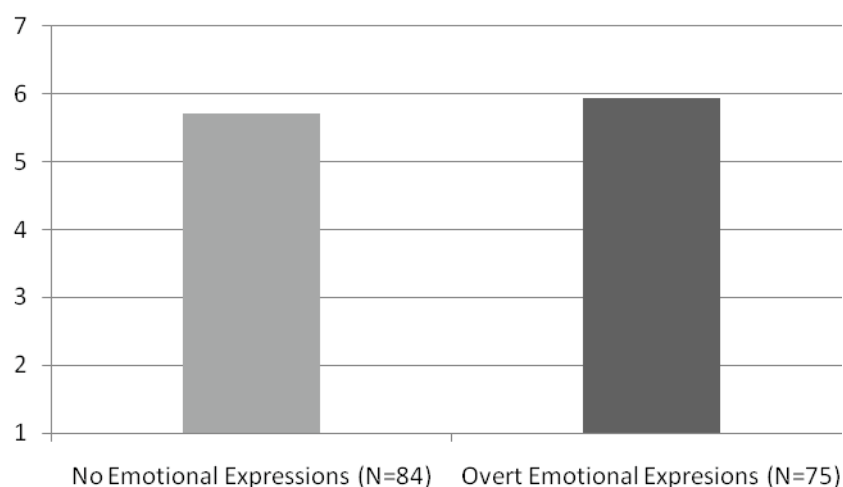


Note. Based on an analysis of variance, there was a marginal significant interaction effect between the overt emotional expressions of a victim and camera perspectives on empathic concern ($F(1, 155) = 2.40; p = .06$; one-tailed test).

Although my initial test of the effect of the victim's overt emotional expressions and camera perspectives on empathic concern found patterns consistent with my expectations, the main effect of the two factors did not reach the statistical significance level. Hence, I further examined the effects of the two factors using an analysis of covariance (with empathy as a personality trait and beliefs in humanitarianism as covariates). The analysis indicated that the emotional expressions had a marginally significant positive effect on empathic concern (for the emotional expression conditions, $M = 5.94$; $SE = .11$; for the non-emotional expression conditions; $M = 5.71$; $SE = .10$; F

(1, 153) = 2.07; $p = .08$; one-tailed test; see Figure 6-4). Hence, I found some evidence to support the expected positive effect of a victim's overt emotional expressions on empathic concern (H3a). The finding, combined with the observed positive effect of the emotional expressions on brow activity, suggested that exposure to the overt emotional expressions of a victim may induce greater empathic concern for the victim by compelling the audience to imitate the emotional expressions of the victim.

Figure 6-4. The Effect of a Victim's Overt Emotional Expressions on Empathic Concern (Study 2)



Note. An analysis of covariance (with empathy as a trait and beliefs in humanitarianism as covariates) showed a marginally significant positive effect of the overt emotional expressions of a victim on empathic concern ($F(1, 153) = 2.07$; $p = .08$; one-tailed test).

However, the analysis of covariance did not find the expected positive effect of close-up camera perspectives on empathic concern. Hence, there was no evidence to

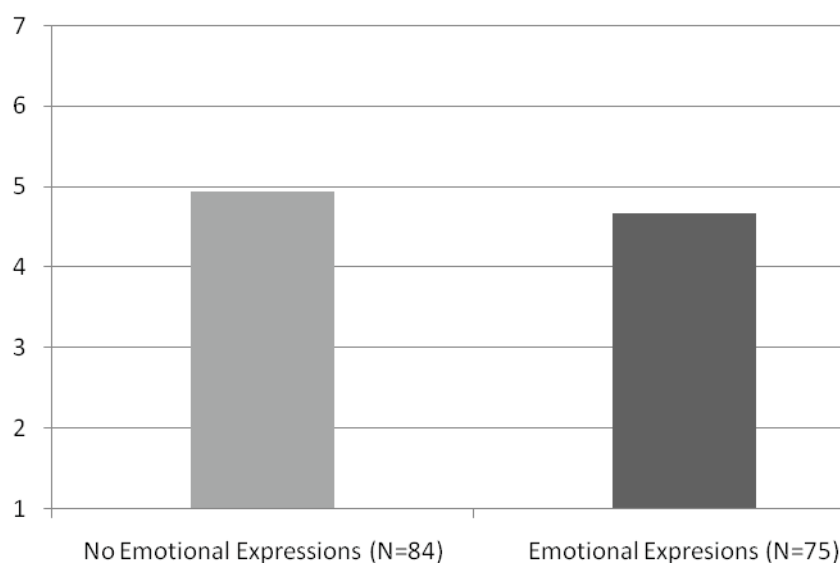
support my prediction that framing a victim in close-ups will induce greater empathic concern than capturing him or her from medium camera perspectives (H3e).

Perspective Taking

Now proceeding to examine the effect of the victim's overt emotional expressions and camera perspectives on perspective taking, an analysis of variance showed that seeing the victim crying led to less perspective taking, on the part of subjects ($M = 4.66$; $SE = .12$), than not seeing the crying ($M = 4.94$; $SE = .11$; $F(1, 155) = 3.04$; $p = .08$; see Figure 6-5). The finding helped to answer the question of how exposure to a victim's overt emotional expressions may influence perspective taking (R1). Given that the negative effect of the emotional expressions on perspective taking was the only significant finding showing up in the analysis, there was no evident to support the prediction that compared to capturing a victim from medium camera perspectives, framing him or her in close-ups will motivate viewers to take the perspective of the victim (H4b).²³

²³ The analysis of covariance (with empathy as a trait and beliefs in humanitarianism as covariates) did not find other significant effects either.

Figure 6-5. The Effect of a Victim's Overt Emotional Expressions on Perspective Taking (Study 2)



Note. An analysis of variance found a marginally significant negative effect of the overt emotional expressions of a victim on perspective taking ($F(1, 155) = 3.04$; $p = .08$).

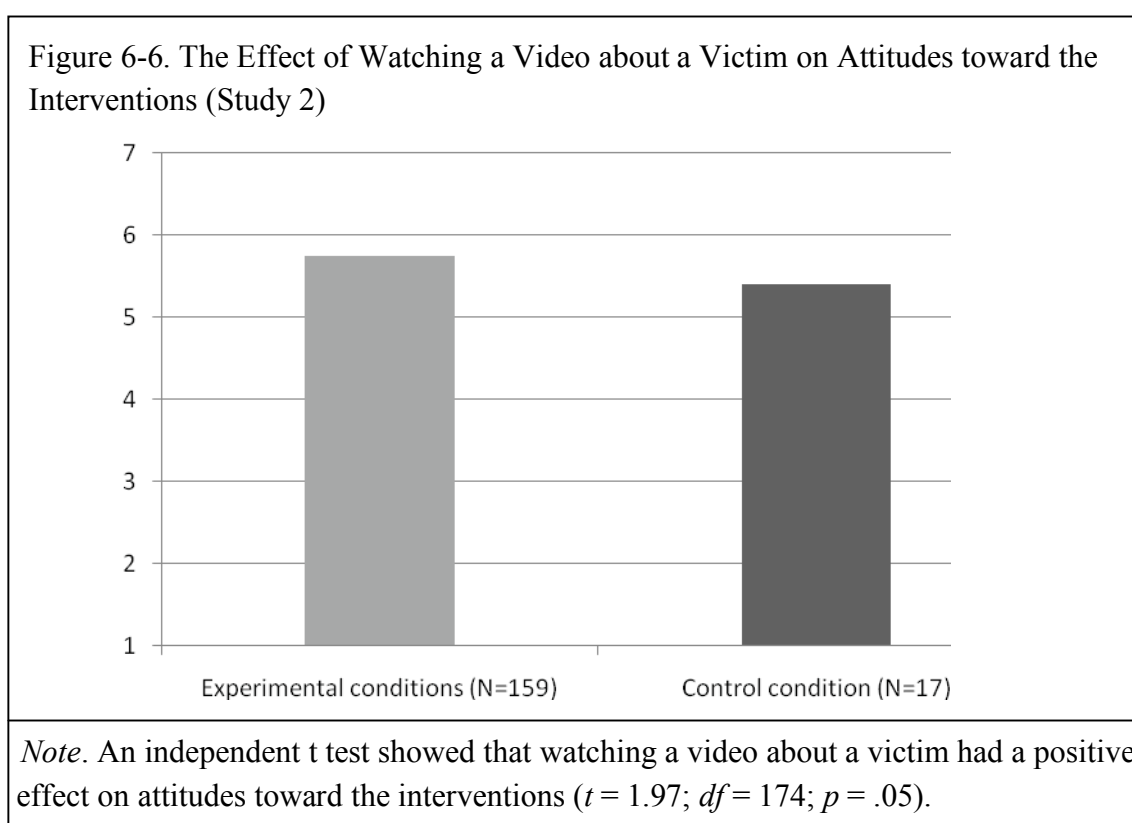
Attitudes toward the Interventions

Thus far, my analyses found the expected positive effect of a victim's overt emotional expressions and the predicted interaction of the emotional expressions and camera perspectives on empathic concern. The analyses, however, did not show the anticipated positive effect of close-up camera perspectives on empathic concern. Given that facial close-ups of a victim were expected to influence viewers' attitudes toward the interventions that benefited the victim group through arousing greater empathic concern for the victim, no further analysis was conducted to examine the effect of close-

ups on subjects' attitudes. Hence, Study 2 did not find evidence to support the prediction that if portraying a victim from close-up camera perspectives has a positive effect on empathic concern, then facial close-ups of the victim will elicit more support for the interventions (H5e).

Next considering the effect of the victim's overt emotional expressions and the interaction of the emotional expressions and camera perspectives on attitudes toward the interventions, an analysis of variance and an analysis of covariance (with empathy as a trait and beliefs in humanitarianism as covariates) did not find the anticipated positive effect of the emotional expressions or the predicted interaction effect of the emotional expressions and camera perspectives on subjects' attitudes. Hence, the study did not find evidence to support the prediction that if seeing a victim's overt emotional expressions has a positive effect on empathic concern, then such exposure will increase support for the interventions (H5a), nor did the study corroborate the idea that if the expected positive effect of the emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium camera perspectives, then a similar interaction between the emotional expressions and camera perspectives will occur for attitudes toward the interventions (H5f).

Nonetheless, an independent t test found that compared to subjects in the control condition ($M = 5.40$; $SE = .76$), those in the experimental conditions, on average, expressed more favorable attitudes toward the interventions ($M = 5.74$; $SE = .69$; $t = 1.97$; $df = 174$; $p = .05$; see Figure 6-6). The finding, hence, suggested that watching a video about a victim had a positive effect on attitudes toward the interventions.



Helping Intentions

As before, given that I expected facial close-ups of a victim to influence viewers' intentions to offer personal aid to the victim group by eliciting greater empathic concern for the victim, and that my analysis did not find the expected positive

effect of close-ups on empathic concern, no further analysis was conducted to test the effect of close-ups on helping intentions. Hence, there was no evidence to support the expectation that if portraying a victim from close-up camera perspectives has a positive effect on empathic concern, then facial close-ups of the victim will produce personal helping behavior to the victim group (H6e).

Turning to the effect of the victim's overt emotional expressions and the interaction of the emotional expression and camera perspectives on helping intentions, an analysis of variance did not find the expected positive effect of the emotional expressions or the anticipated interaction of the emotional expression and camera perspectives on the outcome variable. For this reason, the findings did not support the prediction that if exposure to a victim's overt emotional expressions has a positive effect on empathic concern, then such exposure will elicit more personal aid for the victim group than no such exposure (H6a), nor did the findings support the hypothesis that if the expected positive effect of the emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium camera perspectives, then a similar interaction between the emotional expressions and camera perspectives will occur for helping behavior (H6f). Finally, an independent t test showed that watching a video about a victim did not increase

subjects' willingness to offer private aid to the victim group. The finding indicates that exposure to the video had little impact on people's helping intentions.

The Mediating Role of Empathic Concern

So far, this study did not find the expected positive effect of close-up camera perspectives on empathic concern, nor did it show the anticipated effects of a victim's overt emotional expressions or the predicted interaction of the emotional expressions and camera perspectives on attitudes toward the interventions or helping intentions. For this reason, no further analyses were conducted to test the mediating role that empathic concern may play in the relationships between the two factors (i.e., the emotional expressions and camera perspectives) and subjects' attitudes and behavioral intentions. It is reasonable to conclude that this study did not find evidence to support the predications that the anticipated effects of the emotional expressions (H7a-H8a), camera perspectives (H7e-H8e) and emotional expressions X camera perspectives (H7f-H8f) on viewers' attitudes and behavior are mediated by empathic concern felt for the victim.

In sum, Study 2 examined the effects of the overt emotional expressions and sensory proximity (manifested via facial close-ups of a victim) of a victim on the audience's

psychophysiological responses, empathic concern, perspective taking, attitudes toward the interventions that benefited the victim group, and intentions to offer personal aid to the group. As anticipated, the results showed that exposure to the victim's overt emotional expressions (i.e., crying in the case of this study) heightened levels of brow activity among subjects (an indicator of their imitating the victim's emotional expressions). Also as predicted, compared to portraying the victim from medium camera perspectives, framing him or her in close-ups evoked higher levels of emotional arousal. However, the study did not find the expected positive effect of the emotional expressions or the predicted interaction of the emotional expressions and camera perspectives on emotional arousal.

When it comes to subjects' empathic experience, the study found the expected positive effect of the victim's overt emotional expressions on empathic concern. Also as anticipated, the positive effect of the emotional expressions on empathic concern was more evident when the victim was framed in close-ups than when s/he was captured for medium camera perspectives. However, the study did not demonstrate the predicted positive effect of facial close-ups on empathic concern.

As for the effect on perspective taking, the analysis showed that, compared to not seeing the victim's emotional expressions, seeing the expressions reduced

perspective taking, on the part of the subjects. The analysis, however, did not find the anticipated positive effect of close-up camera perspectives on perspective taking.

Finally, the study did not find evidence to support the expected effects of the victim's overt emotional expression, camera perspectives, and the emotional expressions X camera perspectives on attitudes toward the interventions or helping intentions. Hence, there was no evidence to corroborate the idea that the expected effects of the two factors on viewers' attitudes and behavior will be mediated by empathic concern. Nonetheless, the study showed that watching a video about a victim produced more favorable attitudes toward the interventions than no such exposure.

Chapter 7: Conclusions, Limitations, Implications and

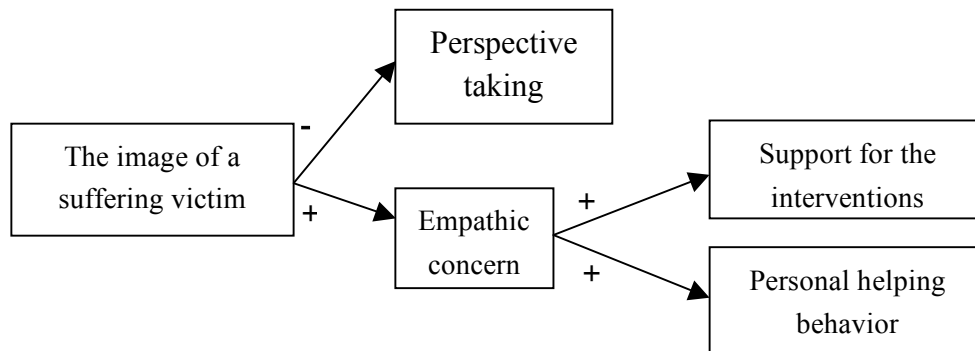
Directions for Future Research

This thesis was driven by three research questions: 1) in what way media portrayals of a victim of a chronic problem will evoke empathic concern for the victim; 2) whether and to what extent the induced empathic concern will increase support for the interventions that benefit the victim group, and produce private aid for the group; and 3) whether taking the perspective of the victim is necessary for experiencing empathic concern for him or her. To answer these questions, two experiments were conducted to examine the effects of three characteristics of media messages about victims of chronic problems—that is, the overt emotional expressions, geographic proximity, and sensory proximity of a victim—on the outcome variables of interest.

Study 1 used a survey-experiment to investigate the effects of the geographic proximity and sensory proximity (manifested via a picture of a victim's suffering experience) of a victim on the audience's empathic concern, perspective taking, attitudes toward the interventions that reduced the needs of the victim group, and private helping behavior to the group (see Figure 7-1, for a model supported by the findings of Study 1). As predicted, the study found that participants who saw a picture of a suffering victim expressed greater empathic concern for the victim than those who

did not see the picture. The finding is consistent with the argument that direct sensory inputs of a victim's suffering (e.g., seeing an image of the suffering) enable people to have concrete sense of the plight of the victim, which, in turn, elicits empathic concern for him or her.

Figure 7-1. The Effects of Exposure to a Picture of the Suffering Experience of a Victim on Empathic Concern, Perspective Taking, Attitudes toward the Interventions, and Personal Helping Behavior (A Summary of the Findings of Study 1)



Also as anticipated, exposure to the victim's picture reduced the likelihood of participants taking the perspective of the victim. The finding corroborates the notion that the visual image allows people to feel for the victim by triggering adaptive reactions, as a result of automatic sensory processes that do not involve higher-order cognitive processes such as perspective taking. As a result, the process of taking the perspective of the victim is short-circuited. The finding is also consistent with the idea that exposure to the visual image of one specific victim makes it difficult for people to

project themselves into the situation of the victim because they can easily identify the differences between themselves and the victim and, therefore, distance themselves from the victim.

Moreover, Study 1 demonstrated the predicted positive effects of seeing the picture on attitudes toward the interventions (that alleviated the suffering of the victim group) and private helping behavior (measured by the amount money donated and willingness to ask others to make contributions to the charitable organization that provided support to the victim group). Further analyses showed that empathic concern felt for the victim played an expected mediating role in the observed relationships between exposure to the picture and participants' attitudes and behavior. The findings confirmed the empathy-attitude-action model proposed by C. D. Batson and his colleagues (2002), which suggests that empathic concern felt for one victim of a chronic problem can induce aid for the victim group as a whole, as long as the group membership is a salient component of the situation toward which empathic concern is evoked. In addition to this, the study also found that compared to participants who did not read the story about the victim, those who read the story—regardless of where the victim lived or the presence or absence of the victim's picture—expressed more favorable attitudes toward the interventions, donated more money to the charitable organization, and were more willing to ask people they knew to make contributions.

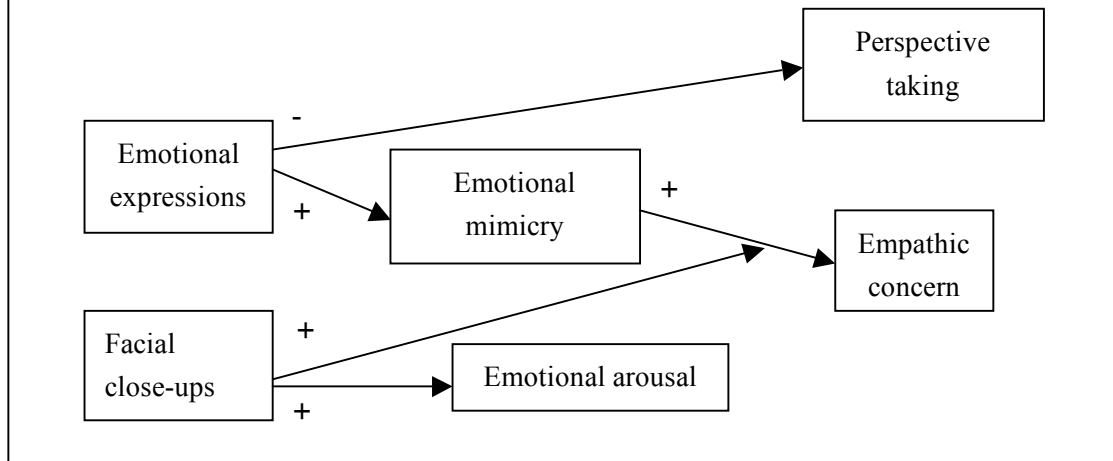
The study, however, did not find the expected positive effect of the geographic closeness of a victim on empathic concern, nor did it show the anticipated interaction of the geographic closeness and the victim's picture on empathic concern. In other words, participants did not show greater empathic concern for a nearby victim than for a distant victim, and the expected negative effect of the geographic distance between the victim and the participants on empathic concern was no more evident in the no-picture conditions than in the picture conditions. For this reason, the study did not find evidence to corroborate the predictions that, by affecting the levels of empathic concern felt for the victim, the geographic proximity and the geographic proximity X the picture will also influence attitudes toward the interventions that benefit the victim group and personal helping behavior to the group.

The lack of a significant positive effect of the geographic proximity of a victim on empathic concern challenges an arguably well accepted notion that geographic closeness drives one to empathize more with others close to home than with those in distant places, and the empathy gap produces more aid for the former than for the latter (Trout, 2008). To be clear, my findings do not suggest that people are no more inclined to express concern for or offer help to others close-by; rather, they indicate that the actual geographic distance between people may not explain why one is more or less likely to be concerned about or help those in need. Future research should consider

other factors (e.g., social and cultural distances) that may account for people's inclinations to help others nearby and support local charitable causes.

Given that Study 1 demonstrated the expected positive effects of the visual representation of a victim's suffering on empathic concern, attitudes toward the interventions that helped the victim group, and personal helping behavior to the group, Study 2 went on to explore what aspects of the representation may further elicit empathic concern and help for the victims (see Figure 7-2 for a model supported by the findings of Study 2). To be specific, Study 2 utilized a laboratory experiment to test the effects of the overt emotional expressions and sensory proximity (manifested through facial close-ups of a victim) of a victim on the outcome variables similar to those examined in Study 1, except that the study also investigated the effects of the two factors on participants' psychophysiological responses.

Figure 7-2. The Effects of a Victim's Overt Emotional Expressions and Camera Perspectives on Psychophysiological Responses, Empathic Concern and Perspective Taking (A Summary of the Findings of Study 2)



As anticipated, Study 2 found that the victim's overt emotional expressions (i.e., crying in the case of this study) heightened subjects' brow activity, which indicated that the subjects imitated the victim's emotional expressions. Also as predicted, portraying the victim from close-up camera perspectives induced higher levels of emotional arousal (indicated by higher skin conductance levels) among participants than capturing him or her from medium perspectives. The study, however, did not find the expected positive effect of the victim's emotional expressions or the anticipated interaction of the emotional expressions and camera perspectives on arousal.

In line with the observed positive effect of the victim's overt emotional expressions on brow activity, Study 2 also showed an expected positive effect of the emotional expressions on empathic concern. In other words, subjects who saw the

victim crying expressed greater empathic concern for the victim than those who did not see him or her crying. This finding, combined with the positive effect of the emotional expressions on brow activity, supports the idea that audience members tend to imitate the emotional expressions of a victim represented in the media. The imitation causes them to share the victim's emotional state, and the emotional sharing, in turn, evokes empathic concern for the victim. In addition to the positive effect of the victim's emotional expressions on empathic concern, there was also evidence that the effect was more evident when the victim was framed in close-ups than when s/he was captured from medium camera perspectives, another finding corroborating my hypothesis.

Moreover, Study 2 found that subjects who saw the victim framed in close-ups showed greater empathic concern for the victim than those who saw him or her captured from medium camera perspectives, even though the difference did not reach the statistical significance level. The finding, thus, is consistent with the observed positive effect of facial close-ups on emotional arousal and my prediction.

With respect to perspective taking, the analysis indicated that seeing the victim's overt emotional expressions prevented subjects from taking the perspective of the victim, which helps to answer the question of how the overt emotional expressions of a victim may influence perspective taking. The finding—combined with the observed positive effects of the emotional expressions on brow activity and empathic concern (as

mentioned earlier)—challenges Eisenberg and her colleagues' (1991) argument that higher-order cognitive activity such as perspective taking is necessary for transforming the shared emotional experience with a target (as a result of imitating the target's emotional expressions) into empathic concern. Although my findings do not indicate how much or what kind of cognitive effort is involved in this transformation process, they suggest that the attempt to adopt the perspective of the target is not necessary for the transformation to occur.

Study 2, however, did not find the expected positive effect of facial close-ups on perspective taking, a finding inconsistent with the observed positive effect of close-ups on emotional arousal and my prediction. In other words, although portraying the victim from close-up camera perspectives heightened emotional arousal, the increased arousal was not translated into perspective taking. This happened perhaps because the close-up manipulation was not strong enough. Recall that only about 60 percent of the footage in the close-up conditions portrayed the victims from close-up perspectives, which may explain why the study found only a marginally significant effect of facial close-ups on emotional arousal but no significant effect on perspective taking. The lack of a strong manipulation of close-ups may also explain why the study found a positive but insignificant effect of close-ups on empathic concern.

As argued in Chapter 2, close-up camera perspectives were expected to induce greater empathic concern and more perspective taking (partly) because seeing a victim framed in close-ups can increase emotional arousal among the audience, as a result of perceived spatial closeness to the victim. The increased emotional arousal, in turn, signifies stronger emotional reactions, and promotes viewers to entertain the perspective of the victim by compelling them to assess the feelings and the intention of the victim. In this logic chain, facial close-ups were more proximal to emotional arousal than to empathic concern and perspective taking. Because of this, the effect of close-ups on emotional arousal should be stronger than that on empathic concern and perspective taking (see Davis, 1996). Given that the study only found a marginally significant effect of close-ups on emotional arousal, it is not entirely surprising that their influence on empathic concern and perspective taking was not significant. Future research may use a stronger manipulation of close-ups—for example, using close-ups of the victim throughout the video rather than in part of the videos—to test the effect of close-ups on empathic concern and perspective taking.

Another possible explanation for the lack of a significant effect of facial close-ups on perspective taking is the relatively low quality of the videos used in the close-up conditions. As mentioned in Chapter 2, close-up camera perspectives may also lead to perspective taking by enabling viewers to discern the details of the facial expressions of

a victim and, therefore, better read his or her mind. However, in this study, facial close-ups of a victim were created by zooming in on the part of the original footage that captured the victim's face from medium camera perspectives. Because of this, the created close-up version of the video should have lower resolution and provide fewer details about the victim's facial expressions than videos originally shot from close-up perspectives. This suggests that, compared to subjects in the medium camera perspective conditions, those in the close-up conditions may not be able to better read the mind of the victim and, therefore, take his or her perspective. Future research should consider using two versions of the same video—one filmed from medium perspectives and the other from close-up perspectives—to investigate the effect of close-ups on perspective taking. Finally, the study's failure to find a positive effect of close-up camera perspectives on perspective taking may simply be because facial close-ups of a victim cannot motivate people to see the situation from the victim's perspective.

Focusing next on the effects of the victim's overt emotional expressions and camera perspectives on attitudes toward the interventions (that benefited the victim group) and private helping behavior (measured by the intentions to offer personal aid to the victim group), Study 2 did not find that the increased empathic concern (as a result of exposure to the victim's emotional expressions or seeing the emotional expressions

framed in close-ups) was translated into support for the interventions or helping intentions; nor did it show that subjects who watched the footage about the victim were more willing to offer personal help to the victim group than those who were not exposed to the footage. My analysis, however, did show that exposure to the footage induced favorable attitudes toward the interventions.

Taken together, Study 2 showed some evidence to support the expected effects of the victim's overt emotional expressions and the predicted interaction of the emotional expressions and camera perspectives on empathic concern; but it found no evidence to support the anticipated effects of the two factors on attitudes toward the interventions or helping intentions. These non-findings may again be accounted for by the lack of strong manipulations of the victim's emotional expressions and close-up camera perspectives, given that only 12% of the videos in the emotional expression conditions showed the victims crying and 60% of the videos in the close-up conditions framed the victims in close-ups. The fact that the two factors are expected to influence people's attitudes and behavioral intentions via affecting empathic concern felt for the victim suggests that the effects of the two factors on attitudes and behavior should be less strong than their effects on empathic concern (for a reason mentioned earlier). This may explain why the study found some evidence to support the predicted effects of the

two factors on empathic concern but no evidence to corroborate the anticipated effects of the factors on subjects' attitudes and behavioral intentions.

The failure of Study 2 to find the expected effects of the victim's overt emotional expressions and camera perspectives on subjects' attitudes and behavioral intentions may also be because of the characteristics of the study participants. Compared to the income levels of participants in Study 1 (with an average household income falling between \$60,000 and \$75,000), that of subjects in Study 2 was fairly low (with an average between \$40, 000 and \$ 50, 000). Given that people with lower income tend to make fewer donations to charitable organizations (see Bekkers & Wieping, 2007 for a review), the income levels of subjects in Study 2 may account for the non-findings with respect to the effects of the two factors on subjects' attitudes and behavioral intentions. The difference in the income levels between participants of the two studies may also explain why I did not find a consistent pattern across the studies showing that increased empathic concern led to more aid for the victim group.

Several strengths and weaknesses of the studies should be kept in mind while drawing conclusions from the results presented here. Starting with the strengths, the experimental nature of the studies allowed me to claim that the observed relationships between the overt emotional expressions and sensory proximity (manifested via a picture of the suffering experience of a victim and facial close-ups of the victim) of a

victim, on one hand, and the outcome variables, on the other hand, are indeed causal. Moreover, each study used two issues to examine the effects of the characteristics of media messages about victims of chronic problems on the outcome variables, which increased my confidence that the observed effects are not issue-specific. Besides the strengths shared by the two studies, Study 1 had its own strength. Specifically, the study was conducted among a national representative sample of white (and non-Hispanic) population, which enabled me to generalize the findings of the study to the target population.

As for the limitations of the studies, only chronic problems that affect certain sub-groups of the population (i.e., women, children and disabled war veterans) were used in the two studies to test the effects of the overt emotional expressions, geographic proximity and sensory proximity of a victim on the outcome variables of interest. Hence, it is unclear how these factors may influence the outcome variables in other contexts. Because of this, more research should be done in the future to examine whether the relationships manifested in my studies extend to other contexts such as human suffering that can happen to anyone.

Moreover, my findings of the positive effects of a victim's overt emotional expressions (i.e., crying in the case of Study 2) on participants' brow activity and empathic concern did not provide unequivocal evidence for the argument that seeing a

victim's emotional expressions causes the audience to imitate the emotional expressions, and the imitation in turn arouses empathic concern for the victim by allowing the audience to share the emotions of the victim. Increased brow activity can be observed when people mimic and/or experience various kinds of negative emotions (e.g., anger and sadness). Therefore, I cannot conclude that the increased brow activity observed in Study 2 was caused by participants' mimicry of the victim's crying. It was possible that the change in brow activity resulted from participants' experiencing some kinds of negative emotions. Also, given that both brow activity and empathic concern were measured outcome variables in Study 2, it was impossible for me to ascertain the causal relationship between the two variables. In other words, it is unclear whether increased brow activity led to greater empathic concern or the other way around.

Beyond this, several features of the studies may prevent me from generalizing the findings to real world contexts. First of all, subjects of both studies were aware that they were participating in a study. As a result, they might have processed the stimuli differently (e.g., paying more attention to the story or to the videos than they normally would do) and/or answered the questions differently (due to, for example, the self-presentation bias). However, the potential influences of study settings and the self-presentation bias on the findings of Study 1 may have been mitigated by the settings of the study. Recall that the study was completed online at a time and a place chosen by

participants (e.g., their home). Thus, the settings of the study were more natural than a laboratory setting, and the participants may have been less likely to feel that they were observed. Nevertheless, it is not entirely clear whether and to what extent, subjects' awareness that they were in a study has undermined the generalizability of the findings of the studies.

In addition to this, Study 1 had its own limitations. The study only tested and demonstrated short-term effects of pictures of suffering victims on the attitudinal and behavioral outcome variables (i.e., attitudes toward the interventions that benefited the victim group and private helping behavior to the group). Although the positive effects of empathic concern on people's attitudes and behavior are expected to last long after the feeling has disappeared (Batson, C. D. et al., 1997; Coke et al., 1972), and Study 1 has shown that the pictures influenced participants' attitudes and behavior via arousing greater empathic concern for the victims, it is still unclear how long the observed attitudinal and behavioral impact of the pictures will last.

Furthermore, participants of Study 1 received five dollars for completion of the study, which might have made them more inclined to make donations.²⁴ On the other hand, there might be participants who would have contributed more than five dollars, if

²⁴ Even so, 57 percent of participants did not donate any money at all. Another 39 percent donated five dollars or less, and the rest donated more than five dollars.

there had been no five-dollar bonus, but donated only five dollars.²⁵ The amount of money participants donated may have also been affected by the context in which the study was conducted. The experiment took place between October 23 and 29, 2008, against the backdrop of the global financial crisis and the deteriorating economic situation in the United States. Hence, the timing of the study might have made participants more reluctant to support government programs that helped the victim group and/or provide private aid to the group.

Finally, participants of Study 1 were able to donate money via Knowledge Networks and/or via a link shown at the end of the study, which cleared some barriers for them and made it easier for them to make donations. In the real world, after reading or watching a charity advertisement, one has to make a phone call or search the website of the organization on-line in order to make a donation. Because of this, those who intend to make contributions may end up giving nothing. Taken together, generalizability issues for the two studies could cut both ways when projecting their findings to real world contexts.

Despite these limitations, the findings of the studies have a number of theoretical and practical implications. To begin with, the results from both studies suggest that the factors that arouse greater empathic concern do not always increase

²⁵ Thirty-four percent of participants made \$5.00 contributions to the organization.

perspective taking, and some of them even have a negative impact on perspective taking. For example, seeing a picture of a suffering victim or the victim's overt emotional expressions evoked greater empathic concern, but at the same time reduced perspective taking. These findings challenge C. D. Batson's (1991) claim that taking the perspective of others in need is necessary for experiencing empathic concern. To be clear, my findings do not question the notion that taking the perspective of a person in distress can elicit empathic concern for him or her. Rather, they demonstrate that people do not have to view the situation from the person's perspective in order to experience empathic concern, and that empathic concern and perspective taking do not always go hand in hand even though some scholars have treated empathic concern and perspective taking as sub-dimensions of one's empathic experience (e.g., Davis, Hull, Young, & Warren, 1987; Duan & Hill, 1996). Given that most factors examined in this thesis turned out to be effective facilitators of empathic concern, more studies should be done in the future to explore in what way mediated representations of human suffering can prompt the audience to adopt the perspectives of people in need.

Moreover, the observed differential effects of the picture and the emotional expressions of a suffering victim on empathic concern and perspective taking also corroborate the idea that affective reactions (e.g., empathic concern) can arise from lower-order automatic sensory processes, with little involvement of higher-order

cognitive processes such as perspective taking (Epstein, 1993). Because empathic concern induced for one victim can elicit help for the victim group, the observed effects of the victim's picture and emotional expressions on empathic concern and perspective taking also imply that media messages that appeal to lower-order automatic sensory processes (e.g., concrete and/or emotion-laden messages) can generate intuitive moral judgments and spontaneous helping behavior without much influence from higher-order cognitive processes (e.g., Gilovich, Griffin, & Kahneman, 2002; Loewenstein & Small, 2007). The findings are also in line with the idea that moral judgments may rest more on affective responses than on deliberation. As the psychologists George Lowenstein and Deborah Small (2007, p. 113) remind us, "Most moral reactions are gut-level emotional reactions rationalized logically, if at all, only after the fact."

The observed mediating role of empathic concern in the relationships between images of suffering victims and the attitudinal and behavioral outcome variables validates the important role that emotions play in attitude formation and decision making. Future research may explore how to induce empathic concern for people in need via activating deliberative thoughts about the plight of these people.

Unlike previous studies that focus on facilitators of empathy in the context of interpersonal communication (Davis, 1996), this thesis examined the facilitator of empathic concern in the context of mediated communication. Its findings expand the

repertoire of the antecedents of empathic concern by demonstrating that factors (e.g., a victim's overt emotional expressions and the picture of his or her suffering experience) other than target-observer similarity or perspective taking instructions can also elicit empathic concern. These findings are particularly meaningful because they suggest that empathic concern can be induced in a natural setting without the audience receiving instructions (of taking the perspective of a victim) from an experimenter and that media messages appealing to a diverse audience—rather than those tailored to a specific segment of the population based upon victim-audience similarity—can also arouse empathic concern for a victim.

Using two indicators of sensory proximity—the picture and facial close-ups of a suffering victim—this thesis tested and found some support for the notion that the perception of sensory closeness to a victim can lead to greater empathic concern. Future studies may test the effect of other indicators of sensory proximity on empathic concern. For instance, they can examine the influences of image size and quality; these factors are worth attention because more and more American families own large-screen televisions, and as of June 2009 major networks in the United States started broadcasting programs with improved picture and sound qualities (e.g., high definition digital programs). Hence, it is important to know in what way these changes in

television viewing experience may affect viewers' emotional reactions to media messages about human suffering.

Awareness of the needs of people in plight has long been considered “a first prerequisite for philanthropy” (Bekkers & Wiepking, 2007, p. 20). Many have argued that the media play an important role in conveying such needs and eliciting aid for those in distress (e.g., Simon, 1997; see also Bennett & Kottasz, 2000). By showing that compared to no exposure at all, exposure to media messages about victims of chronic problems produced more support for the interventions that benefited the victim group and more personal helping behavior to the group, my findings corroborate the intuitive claim that media messages about human suffering can call forth help from the audience. The findings also suggest that the media can play an important role in motivating people (who have the resources to help but are insulated from firsthand exposure to others' plight) to provide aid to those in need.

Individual giving has always been the largest component of charitable contributions. For example, about \$229 billion contributions—that is 75% of the total charitable contributions—were from individuals in 2008 (GivingUSA Foundation, 2009). The findings of this thesis suggest how charitable organizations that attempt to solicit private donations via media campaigns can do so more effectively. For example, my findings indicate that including a picture of the suffering experience of a victim in

an advertisement may induce more empathy for the victim and, consequently, produce more donations.

Solving the problems that threaten the survival and well-being of human beings requires not only grass-roots efforts but also government actions. One way to push governments to take actions in democratic countries such as the United States is to elicit public support for the actions. Public opinion often exerts considerable impact on government decisions and policy making in the United States, as demonstrated by the number of public opinion polls conducted each year and by the efforts that politicians make to win over people's support for their policies. For example, between June and September of 2009, *CBS* alone conducted five opinion polls to gauge Americans' favorability of President Obama's new health care plan.²⁶ Meanwhile, the president held town hall meetings all over the country to campaign for his new plan. Arguably, a popular policy should be more likely to be approved by the Congress than an unpopular one. For this reason, the findings of this thesis also have important policy implications because they suggest in what way media portrayals of a victim of a chronic problem can induce favorable attitudes toward government interventions that help the victim group.

This thesis used American victims and chronic problems known to most people to test—among American participants—the effects of the characteristics of media

²⁶ The information was retrieved from <http://www.pollingreport.com/health.htm>

messages about human suffering. However, human suffering does not stop at the national or cultural boundaries, and many people around the world are suffering, as a result of problems common in many places in the world (e.g., poverty and domestic violence) and/or problems that are unique to their own cultures (e.g., honor killing in Islamic countries). Because of this, more research should be done in the future to explore in what way the media can induce empathic concern and help for people from other countries and/or for those threatened by problems that are alien to the audience with different cultural backgrounds. Understanding in what way media representations of human suffering can transcend cultural and national boundaries is invaluable because eliminating chronic threats to the survival and welfare of human beings dictates the actions of individuals, organizations and governments around the world. If Elizabeth Thomas is correct in recognizing that “Empathy is the only human superpower—it can shrink distance, cut through social and power hierarchies, transcend differences, and provoke political and social change,” then it is imperative to understand how to elicit empathy globally for those in need.

Appendix A: Pictures and Stories in Study 1

The abused woman story:

Until a few days ago, Susanna lived with her husband in [STATE NAME].²⁷ Her husband often beat her, leaving bruises all over her body. Today she is safe, residing at the Save Abused Women Shelter at an undisclosed location in [STATE NAME]. Unfortunately, the huge demand for room in this shelter means Susanna can stay only for a few days. She is financially dependent on her husband for housing, and has no place to go. She lives in fear because she knows she must leave the shelter and fears that her husband will beat her again if she tries to go back to her home.

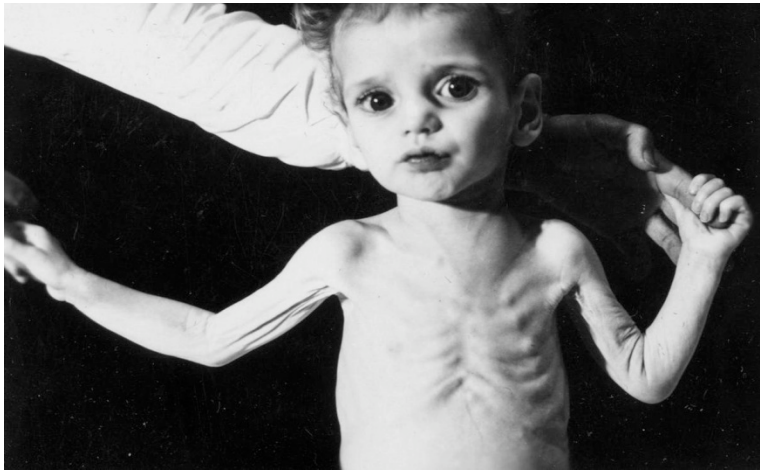


A picture of Susanna taken by a staff member at the shelter

²⁷ Knowledge Networks collected information about where participants resided. Based upon the information, I manipulated the location of the victim in the following way. In the own state conditions, the victim was from the state where participants lived. In the far-away state conditions, the victim was from Montana for respondents living in Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Michigan, Pennsylvania, Ohio, Indiana, West Virginia, Virginia, New Jersey, Delaware, Maryland, Washington DC, Kentucky, North Carolina, South Carolina, Georgia and Florida; the victim was from Alaska for respondents living in Wisconsin, Illinois, Tennessee, Alabama, Mississippi, Minnesota, Iowa, Missouri, Arkansas, Louisiana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas; the victim was from North Carolina for respondents living in Montana, Idaho, Wyoming, Utah, Colorado, Arizona and New Mexico; and the victim was from Kentucky for respondents living in Washington, Oregon, Nevada, California, Alaska and Hawaii.

The hungry child story:

When the economy goes bad, it is poor children who suffer the most. Nine-year-old David ran away from a bad home situation and is living in rural [STATE NAME]. He gets food by eating from dumpsters. Hunger and severe malnutrition is now a fact of life for him. Last year, Feeding Hungry Children made sure David received nutritious meals at least three times a week, but cutbacks in charitable giving have meant that Feeding Hungry Children can no longer afford to reach David and other children like him in rural areas of [STATE NAME].



A picture of David taken by a staff member of Feeding Hungry Children

Appendix B: Measures in Study 1

Empathic concern

Please tell us to what extent you experienced each of the following feelings for [victim name] when you read about [victim name] (rated on 7-point scales with 1 indicating “not at all” and 7 “extremely”):

- 1) I felt sympathy for [victim name].
- 2) I felt compassion for [victim name].
- 3) My heart went out to [victim name].
- 4) I felt sorry for [victim name].
- 5) I felt concern for [victim name].

Perspective taking

Please tell us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales with 1 indicating “completely disagree” and 7 “completely agree”):

For the abused woman (Susanna):

When I read about Susanna...

- 1) I imagined what it was like to be in her situation.
- 2) I imagined what it would feel like to be her.
- 3) I could easily imagine what was like to be in Susanna’s situation.
- 4) I thought a lot about what I personally would do if I were in her situation.

For the hungry child (David)

When I read about David...

- 1) I imagined what it was like to be in his situation.
- 2) I imagined what it would feel like to be him.
- 3) I could easily imagine what was like to be in David’s situation.
- 4) I thought a lot about what I personally would do if I were in his situation.

Actual donation behavior and intentions to help

Helping abused women

- 1) I would like to help abused women [like Susanna]²⁸ by donating money to the Abused Women's Advocacy Project, an organization that builds shelters for abused women. (YES/NO)
[If yes, go to question 2, if no, jump to question 3]
- 2) As a reminder, you will receive 5,000 bonus points (worth \$5.00) credited to your Knowledge Networks account for completing this survey. You can donate any part of this \$5.00 to the Abused Women's Advocacy Project to build more shelters for abused women. Or you can donate more than \$5.00, if you would like.
Please specify the amount of money you would like to donate. You can enter any amount from \$0.00 to \$5.00 or higher if you would like to donate more. If you donate more than \$5.00, Knowledge Networks will donate \$5.00 on your behalf and you'll receive more details on donating the rest of the amount you specify at the end of the survey.
\$ _____
- 3) Please tell us to what extent the following statement describes you personally (rated on a 7-point agree-disagree scale):
I am willing to help abused women by asking people that I know to donate money to build more shelters.

Helping hungry children

- 1) I would like to help hungry children [like David] by donating money to Feeding Hungry Children, an organization that helps to feed hard to reach children in rural areas. (YES/NO)
[If yes, go to question 2, if no, jump to question 3]
- 2) As a reminder, you will receive 5,000 bonus points (worth \$5.00) credited to your Knowledge Networks account for completing this survey. You can donate any part of this \$5.00 to Feeding Hungry Children, an organization that helps to

²⁸ The question in the control condition is worded as follows: "I would like to help abused women by donating..."

feed hard to reach children in rural areas. Or you can donate more than \$5.00, if you would like.

Please specify the amount of money you would like to donate. You can enter any amount from \$0.00 to \$5.00 or higher if you would like to donate more. If you donate more than \$5.00, Knowledge Networks will donate \$5.00 on your behalf and you'll receive more details on donating the rest of the amount you specify at the end of the survey.

\$ _____

- 3) Please tell us to what extent the following statement describes you personally (rated on a 7-point agree-disagree scale):

I am willing to help hungry children by asking people that I know to donate money.

Attitudes toward the interventions

Please let us know to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales):

Attitudes toward the interventions that benefit abused women

- 1) Law enforcement should do more to prevent domestic violence from happening.
- 2) Law enforcement should do more to prosecute those who engage in domestic violence.
- 3) The government should not be expected to provide more support for abused women (e.g., building more shelters).
- 4) I am willing to help abused women by supporting the use of federal tax dollars to build more shelters.
- 5) Civic groups and charities have not paid enough attention to the problem of domestic violence.
- 6) Civic groups and charities should provide more support for abused women.
- 7) Law enforcement cannot be expected to do more than they already do to protect abused women.

Attitudes toward the interventions that benefit hungry children

- 1) Governments should do more to prevent hunger among children.
- 2) Governments cannot be expected to do more than they already do to provide support for hungry children.

- 3) Civic groups and charities have not paid enough attention to the problem of hunger among children
- 4) Governments should allocate more of their budget to feed children living in hunger.
- 5) I am willing to help hungry children by supporting the use of the federal tax dollars to feed them.
- 6) Civic groups and charities should provide more food to hungry children.
- 7) There are only so much civic groups and charities can do to help children living in hunger, and they are already doing it.

Manipulation check

Geographic proximity

Do you happen to remember where Susanna [or David] lives?

In the state where I live

In a nearby state

In the U.S. but in a far-away state

Outside of the U.S.

Don't remember

Sensory proximity

Please tell us to what extent you agree or disagree with the following statement (rated on a 7-point agree-disagree scale):

For abused women conditions

When I read about Susanna, I could see how severely she had been injured by her husband.

For hungry children conditions

When I read about David, I could see how malnourished he was.

Appendix C: Test Items in Study 2

Demographics

- 1) Are you male or female?
 - a) Male
 - b) Female
- 2) What is your race? Are you white, black, Asian, or some other races?
 - a) White
 - b) Black
 - c) Asian
 - d) Others or mixed race
- 3) How old are you? _____ (Type your age in years).
- 4) Which category best represents your household's total income last year before taxes and other deductions?
 - a) \$10, 000 to \$19, 999
 - b) \$20, 000 to \$29, 999
 - c) \$30, 000 to \$39, 999
 - d) \$40, 000 to \$49, 999
 - e) \$50, 000 to \$59, 999
 - f) \$60, 000 to \$79, 999
 - g) \$80, 000 to \$99, 999
 - h) \$100, 000 and higher

Empathy as a trait

Please tell us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales with 1 indicating “completely disagree” and 7 “completely agree”):

- 1) I usually have tender, concerned feelings for people less fortunate than me.
- 2) I usually don't feel very sorry for other people when they are having problems.
- 3) When I see someone being taken advantage of, I usually feel kind of protective towards him or her.
- 4) When I see someone being treated unfairly, usually I don't feel very much pity for him or her.
- 5) I am usually quite touched by things that I see happen.
- 6) I would describe myself as a pretty soft-hearted person.
- 7) Usually I am not concerned when I see someone else in trouble.

- 8) When someone gets hurt in my presence, I usually feel sad and want to help.

Beliefs in humanitarianism

Please tell us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales):

- 1) One should always find ways to help others less fortunate than oneself.
- 2) A person should always be concerned about the well-being of others.
- 3) It is best not to get too involved in taking care of other people's needs.
- 4) People tend to pay more attention to the well-being of others than they should.
- 5) The dignity and well-being of all should be the most important concerns in any society.
- 6) One of the problems of today's society is that people are often not kind enough to others.

Empathic concern (see Appendix B).

Perspective taking

Please tell us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales):

For the abused woman (Joyce)

When I watched the video...

- 1) I imagined what it was like to be in Joyce's situation.
- 2) I imagined what it would feel like to be Joyce.
- 3) I found it very hard to imagine what it was like to be in Joyce's shoes.
- 4) I could easily imagine what it was like to be in Joyce's situation.
- 5) I thought a lot about what I personally would do if I were in Joyce's situation.

For the disabled war veteran (Wayne)

When I watched the video...

- 1) I imagined what it was like to be in Wayne's situation.
- 2) I imagined what it would feel like to be Wayne.

- 3) I found it very hard to imagine what it was like to be in Wayne's shoes.
- 4) I could easily imagine what it was like to be in Wayne's situation.
- 5) I thought a lot about what I personally would do if I were in Wayne's situation.

Helping intentions

Please tell us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales):

For abused women

- 1) I am willing to help abused women [like Joyce] by donating money to charities that are committed to protecting abused women through building shelters and/or providing legal service.
- 2) I am willing to help abused women by asking people that I know to donate money to charities that are committed to protecting abused women.

For disabled war veterans

- 1) I am willing to help disabled war veterans [like Wayne] by donating money to charities that provide help for disabled war veterans (for example providing medical treatment and/or financial support).
- 2) I am willing to help disabled war veterans by asking people that I know to donate money to charities that provide help for disabled war veterans.

Attitudes toward the interventions

Please let us to what extent you agree or disagree with each of the following statements (rated on 7-point agree-disagree scales).

Attitudes toward the interventions that benefit abused women

- 1) Law enforcement should do more to prevent domestic violence from happening.
- 2) Law enforcement should do more to prosecute those who engage in domestic violence.
- 3) The government should not be expected to provide more support for abused women (for example, building more shelters and/or providing more legal service).

- 4) I support the use of tax dollars to protect abused women.
- 5) I am willing to pay higher taxes to help the government to protect abused women.
- 6) Civic groups and charities should provide more support for abused women.
- 7) Civic groups and charities cannot be expected to do more than they already do to help abused women.

Attitudes toward the interventions that benefit disabled war veterans

- 1) The government should do more to help disabled war veterans.
- 2) The government should do more to take care of disabled war veterans.
- 3) The government should not be expected to provide more support for disabled war veterans (for example, providing more medical treatment and/or financial support).
- 4) I support the use of tax dollars to help disabled war veterans.
- 5) I am willing to pay higher taxes to help the government provide more support for disabled war veterans.
- 6) Civic groups and charities should provide more support for disabled war veterans.
- 7) Civic groups and charities cannot be expected to do more than they already do to help disabled war veterans.

Appendix D: Correlations among Outcome Variables of Study 1

	Empathic concern	Perspective Taking	Attitudes toward the interventions	Helping intentions	Actual amount of money donated
Empathic concern	--	--	--	--	--
Perspective taking	.41**	--	--	--	--
Attitudes toward the interventions	.44**	.35**	--	--	--
Helping intentions	.26**	.37**	.38**	--	--
Actual amount of money donated	.19**	.10**	.14**	.18**	--

Note. ** $p < .01$

Appendix E: Correlations among Outcome Variables of Study 2

	Empathic concern	Perspective Taking	Attitudes toward the interventions	Helping intentions
Empathic concern	--	--	--	--
Perspective taking	.45**	--	--	--
Attitudes toward the interventions	.35**	.30**	--	--
Helping intentions	.32**	.30**	.37**	--

Note. ** $p < .01$

Appendix F: Hypotheses/Research Question and Test Results by Outcome Variable²⁹

Brow activity (Tested in Study 2):

H1a: Exposure to the overt emotional expressions of a victim (i.e., crying in the case of Study 2) will increase brow activity among the audience. (*Supported*)

Emotional arousal (Tested in Study 2):

H2a: Exposure to the overt emotional expressions of a victim will increase levels of emotional arousal among the audience. (*Not supported*)

H2b: Portraying a victim from close-up camera perspectives will induce higher levels of arousal than capturing him or her from medium perspectives. (*Supported*)

H2c: The expected positive effect of the victim's emotional expressions on arousal will be more evident when the victim is framed in close-ups than when s/he is portrayed from medium perspectives. (*Not supported*)

Empathic concern (Tested in Study 1 & Study 2)

H3a: Exposure to the overt emotional expressions of a victim will induce greater empathic concern for the victim than no such exposure. (Study 2; *Supported*)

H3b: A media portrayal of a nearby victim will evoke greater empathic concern than that of a distant victim. (Study 1; *Not supported*)

H3c: Seeing a picture of the suffering experience of a victim will arouse greater empathic concern relative to not seeing the picture. (Study 1; *Supported*)

H3d: The expected negative effect of the actual geographic distance between a victim and the audience will be more evident when a picture of the victim's suffering is absent than when the picture is present. (Study 1; *Not supported*)

²⁹ The study used to test one particular hypothesis/research question and/or the test result is in the parentheses.

H3e: Portraying a victim from close-up camera perspectives will produce greater empathic concern than capturing him or her from medium perspectives. (Study 2; *Not supported*)

H3f: The expected positive effect of a victim's overt emotional expressions on empathic concern will be more evident when the victim is captured by close-ups than when s/he is portrayed from medium perspectives. (Study 2; *Supported*)

Perspective taking (Tested in Study 1 & Study 2):

R1: How will exposure to a victim's overt emotional expressions influence perspective taking? (Study 2; *Marginally significant negative effect*)

H4a: Seeing a picture of the suffering experience of a victim will reduce the likelihood of the audience taking the perspective of the victim. (Study 1; *Supported*)

H4b: Portraying a victim from close-up camera perspectives will motivate the audience to take the perspective of the victim. (Study 2; *Not supported*)

Attitudes toward the interventions that benefit the victim group (Tested in Study 1 & Study 2):

H5a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on empathic concern, such exposure will elicit support for the interventions that benefit the victim group. (Study 2; *Not supported*)

H5b: To the extent that the geographic proximity of a victim has a positive effect on empathic concern, a media portrayal of a nearby victim will induce more support for the interventions than that of a distant victim. (Study 1; *Not supported*)

H5c: To the extent that seeing a picture of the suffering experience of a victim has a positive effect on empathic concern, such exposure will increase support for the interventions. (Study 1; *Supported*)

H5d: To the extent that the expected negative effect of the actual geographic distance between a victim and the audience on empathic concern is more evident when a picture of the victim's suffering is absent than when the picture is present, a similar interaction effect of the geographic distance and the picture should also occur for attitudes toward the interventions. (Study 1; *Not supported*)

H5e: To the extent that portraying a victim from close-up camera perspectives has a positive effect on empathic concern, facial close-ups of the victim will increase support for the interventions. (Study 2; *Not supported*)

H5f: To the extent that the expected positive effect of a victim's overt emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium camera perspectives, a similar interaction effect between the emotional expressions and camera perspectives should occur for attitudes toward the interventions. (Study 2; *Not supported*)

Providing personal help to the victim group (Tested in Study 1 & Study 2)³⁰:

H6a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on empathic concern, such exposure will produce private helping behavior to the victim group. (Study 2; *Not supported*)

H6b: To the extent that the geographic proximity of a victim has a positive effect on empathic concern, a media portrayal of a nearby victim will produce more helping behavior than that of a distant victim. (Study 1; *Not supported*)

H6c: To the extent that seeing a picture of the suffering experience of a victim has a positive effect on empathic concern, such exposure will induce personal aid for the victim group. (Study 1; *Supported*)

H6d: To the extent that the negative effect of the actual geographic distance between a victim and the audience on empathic concern is more evident when a picture of the victim's suffering is absent than when the picture is present, a similar interaction effect of the geographic distance and the picture should occur for personal helping behavior. (Study 1; *Not supported*)

H6e: To the extent that portraying a victim from close-up camera perspectives has a positive effect on empathic concern, facial close-ups of the victim will produce personal helping behavior to the victim group. (Study 2; *Not supported*)

H6f: To the extent that the expected positive effect of a victim's overt emotional expressions on empathic concern is more evident when the victim is framed in close-ups than when s/he is portrayed from medium camera perspectives, a similar interaction effect between the emotional expressions and camera perspectives should occur for helping behavior. (Study 2; *Not supported*)

³⁰ In Study 1, the helping behavior was measured by participants' actual donation behavior and their willingness to ask people they knew to make donations to a charitable organization that helped the victim group. In Study 2, however, the helping behavior was captured by helping intention questions.

Empathic concern mediating the effects of the factors on attitudes toward the interventions (Tested in Study 1 & Study 2):

H7a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on attitudes toward the interventions that benefit the victim group, the observed effect should be mediated by empathic concern induced for the victim. (Study 2; *Not supported*)

H7b: To the extent that the geographic proximity of a victim has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern. (Study 1; *Not supported*)

H7c: To the extent that exposure to a visual image of the suffering experience of a victim has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern. (Study 1; *Supported*)

H7d: To the extent that there is an expected interaction effect of the geographic proximity and the victim's picture on attitudes toward the interventions, the observed effect should be mediated by empathic concern. (Study 1; *Not supported*)

H7e: To the extent that framing a victim in close-ups has a positive effect on attitudes toward the interventions, the observed effect should be mediated by empathic concern. (Study 2; *Not supported*)

H7f: To the extent that there is an expected interaction effect of a victim's overt emotional expressions and camera perspectives on attitudes toward the interventions, the observed effect should be mediated by empathic concern. (Study 2; *Not supported*)

Empathic concern mediating the effects of the factors on private helping behavior (Tested in Study 1 & Study 2):

H8a: To the extent that exposure to a victim's overt emotional expressions has a positive effect on private helping behavior to the victim group, the observed effect should be mediated by empathic concern induced for the victim. (Study 2; *Not supported*)

H8b: To the extent that the geographic proximity of a victim has a positive effect on helping behavior, the observed effect should be mediated by empathic concern. (Study 1; *Not supported*)

H8c: To the extent that exposure to a visual image of the suffering experience of a victim has a positive effect on helping behavior, the observed effect should be mediated by empathic concern. (Study 1; *Supported*)

H8d: To the extent that there is an expected interaction effect of the geographic proximity and the victim's picture on helping behavior, the observed effect should be mediated by empathic concern. (Study 1; *Not supported*)

H8e: To the extent that framing a victim in close-ups has a positive effect on helping behavior, the observed effect should be mediated by empathic concern. (Study 2; *Not supported*)

H8f: To the extent that there is an expected interaction effect of a victim's overt emotional expressions and camera perspectives on helping behavior, the observed effect should be mediated by empathic concern. (Study 2; *Not supported*)

References

- Adelmann, P. K., & Zajonc, R. B. (1989). Facial efference and the experience of emotion. *Annual Review of Psychology*, 40, 249-280. doi:10.1146/annurev.ps.40.020189.001341
- Bagozzi, R. P., & Moore, D. J. (1994). Public service advertisements: Emotions and empathy guide prosocial behavior. *Journal of Marketing*, 58(1), 56-70.
- Bar-Anan, Y., Liberman, N., & Trope, L. (2006). The association between psychological distance and construal level: Evidence from an implicit association test. *Journal of Experimental Psychology: General*, 135, 609-622. doi: 10.1037/0096-3445.135.4.609
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategies and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Batson, C. D. (1991). *The altruism question: Toward a social psychological answer*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Batson, C. D., Batson, J. G., Todd, R. M., Brummett, B. H., Shaw, L. L., & Aldeguer, M. R., (1995). Empathy and collective good: Caring for one of the others in a social dilemma. *Journal of Personality and Social Psychology*, 68(4), 619-631.
- Batson, C. D., Chang, J., Orr, R., & Rowland, J. (2002). Empathy, attitudes, and action:

Can feeling for a member of a stigmatized group motivate one to help the group.

Personality and Social Psychology Bulletin, 28, 1656-1666. doi:10.1177/014616702237647

Batson, C. D., & Coke, J. (1981). Empathy: A source of altruistic motivation for helping. In J. Rushton & R. Sorrentino (Eds.), *Altruism and helping behavior* (pp. 167-187). Hillsdale, NJ: Lawrence Erlbaum Associates.

Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, 40(2), 290-302.

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology*, 72(1), 105-118.

Batson, C. D., Turk, C. L., Shaw, L. L., & Klein, T. R. (1995). Information function of empathic emotion: Learning that we value the other's welfare. *Journal of Personality and Social Psychology*, 68(2), 300-313.

Bekkers, R., & Wiepking, P. (2007). *Generosity and philanthropy: A literature review* (Manuscript in progress). Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1015507

- Bennett, R., & Kottasz, R. (2000). Emergency fund-raising for disaster relief. *Disaster Prevention and Management*, 9(5), 352-359.
- Betancourt, H. (1990). An attribution-empathy model of helping behavior: Behavioral intentions and judgments of help-giving. *Personality and Social Psychology*, 16, 573-591. doi: 10.1177/0146167290163015
- Bolls, P., Lang, A., & Potter, R. (2001). The use of facial EMG to measure emotional responses to radio. *Communication Research*, 28(5), 627-651.
- Boorstin, D. J. (1987). *Hidden history*. New York, NY: Harper & Row.
- Bordwell, D., & Thompson, K. (2001). *Film art: An introduction* (6th ed.). New York, NY: McGraw Hill.
- Carr, L., Iacoboni, M., Dubeau, M. C., Mazziotta, J. C., & Lenzi, G. L., (2003). Neural mechanisms of empathy in humans: A relay from neural systems for imitation to limbic areas. *Proceedings of the National Academy of Sciences U.S.A.*, 100(9), 5497-5502.
- Charity Review Council. (2007). *Survey of Minnesotan's charitable giving habits and perceptions of charitable organizations*. Retrieve from http://www.smartgivers.org/sites/623b9026-c292-4f47-9b9d-8aac6d22782d/uploads/Charities_Review_Council_Survey_2007_Final_Report.pdf
- Clore, G. L., & Jeffery, K. M. (1972). Emotional role playing, attitude change, and

attraction toward a disabled person. *Journal of Personality and Social Psychology*, 23(1), 105-111.

Codispoti, M., & De Cesarei, A. (2007). Arousal and attention: Picture size and emotional reactions. *Psychophysiology*, 44, 680–686. doi: 10.1111/j.14698986.2007.00545.x

Coke, J. S., Batson, C. D., McDavis, K. (1978). Empathic mediation of helping: A two-stage model. *Journal of Personality and Social Psychology*, 36(7), 752-766.

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85. Retrieved from http://www.uv.es/~friasnav/Davis_1980.pdf

Davis, M. H. (1983). The effects of dispositional empathy on emotional reactions and helping: A multidimensional approach. *Journal of Personality*, 51(2), 167-184.

Davis, M. H. (1996). *Empathy: A social psychological approach*. Boulder, CO: the Westview Press, Inc.

Davis, M. H., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on the cognitive representation of persons: A merging of self and other. *Journal of Personality and Social Psychology*, 70(4), 713-726.

Davis, M. H., Hull, J. G., Young, R. D., & Warren, G. G. (1987). Emotional reactions

to dramatic film stimuli: The influence of cognitive and emotional empathy.

Journal of Personality and Social Psychology, 52(1), 126-133.

Decety, J., & Lamm, C. (2006). Human empathy through the lens of social neuroscience. *The Scientific World Journal*, 6, 1146-1163. doi: 10.1100/tsw.2006.221

Detenber, B. H., & Reeves, B. (1996). A bio-informational theory of emotion: Motivation and image size effects on viewers. *Journal of Communication*, 46(3), 66-84.

Dickert, S. (2008). *Two routes to perception of need: The role of affective vs. deliberative information processing in prosocial behavior* (Doctoral dissertation). Retrieved from Proquest Dissertation and Theses Fulltext. (Publication No. AAT 3309138)

Dimberg, U., Thunberg, M., & Elmehed, K. (2000). Unconscious facial reactions to emotional facial expressions. *Psychological Science*, 11(1), 86-89.

Duan, C., & Hill, C. E. (1996). The current state of empathy research. *Journal of Counseling Psychology*, 43(3), 261-274.

Duclos, S. E., Laird, J. D., Schneider, E., Sexter, M., Stern, L., & Van Lichten, O. (1989). Emotion-specific effects of facial expressions and postures on emotional experience. *Journal of Personality and Social Psychology*, 57(1), 100-108.

- Eisenberg, N., Shea, C. L., Carlo, G., & Knight, G. P. (1991). Empathy-related responding and cognition: A “chicken and the egg” dilemma. In W. Kurtines & J. Gewirtz (Eds.), *Handbook of moral behavior and development: Vol. 2. Research* (pp. 63-88). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ekman, G., & Bratfisch, O. (1965). Subjective distance and emotional involvement: A psychological mechanism. *Acta Psychologica*, 24(5), 230-237.
- Epstein, S. (1993). Emotion and self-theory. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 313-326). New York, NJ: Guilford.
- Feldman, S., & Steenbergen, M. R. (2001). The humanitarian foundation of public support for social welfare. *American Journal of Political Science*, 45(3), 658-677.
- Feldman, S., & Zaller, J. (1992). The political culture of ambivalence: Ideological responses to the welfare state. *American Journal of Political Science*, 36(1), 268-307.
- Field, T., Woodson, R., Cohen, D., Garcia, R., & Greenberg, R. (1982). Discrimination and imitation of facial expressions by term and preterm neonates. *Infant Behavior Development*, 6(4), 485-489.
- Figueiras, M., Price, H., & Marteau, T. M. (1999). Effects of textual and pictorial

information upon perceptions of down syndrome: An analogue study.

Psychology and Health, 14, 761-771. doi: 10.1080/08870449908410763

Fridlund, A. J., & Cacioppo, J. T. (1986). Guidelines for human electromyographic research. *Psychophysiology*, 23(5), 567-589.

Fujita, K., Henderson, M., Eng, J., Trope, Y., & Liberman, N. (2006). Spatial distance and mental construal of social events. *Psychological Science*, 17(4), 278-282.

Galinsky, A. D., Ku, G., & Wang, C. S. (2005). Perspective-taking and self-other overlap: Fostering social bonds and facilitating social coordination. *Group Processes and Intergroup Relations*, 8, 109–125. doi: 10.1177/1368430205051060

Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology*, 78(4), 708-724.

Gilovich, T., Griffin, D., & Kahneman, D. (Ed.). (2002). *Heuristics and biases: The psychology of intuitive judgment*. New York, NY: Cambridge University Press.

GivingUSA Foundation (2009). *U.S. charitable giving estimated to be \$307.65 billion in 2008*. Retrieved from http://www.philanthropy.iupui.edu/News/2009/docs/GivingReaches300billion_06102009.pdf

Grosbras, M. H., & Paus, T. (2006). Brain networks involved in viewing angry hands or

- faces. *Cerebral Cortex*, 16, 1087-1096. doi: 10.1093/cercor/bhj050
- Gruen, R. J., & Mendelsohn, G. (1986). Emotional responses to affective displays in others: The distinction between empathy and sympathy. *Journal of Personality and Social Psychology*, 51(3), 609-614.
- Gump, B. B., & Kulik, J. A. (1997). Stress, affiliation and emotional contagion. *Journal of Personality and Social Psychology*, 72(2), 305-319.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1992). Primitive emotional contagion. In M. S. Clark (Eds.), *Review of personality and social psychology: Vol. 14. Emotion and social behavior* (pp. 151-177). Thousand Oaks, CA: Sage Publications.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion*. New York, NY: Cambridge University Press.
- Hauser, M. D. (2006). *Moral Minds*. New York, NJ: Harper Collins.
- Henderson, M. D., Fujita, K., Liberman, N., & Trope, Y. (2006). Transcending the “here”: The effect of spatial distance on social judgment. *Journal of Personality and Social Psychology*, 91, 845-856. doi: 10.1037/0022-3514.91.5.845
- Hietanen, J. K., Surakka, V., & Linnankoski, I. (1998). Facial electromyographic responses to vocal affect expressions. *Psychophysiology*, 35(5), 530-536.
- Hoffman, M. L. (1984). Interaction of affect and cognition in empathy. In C. E. Izard,

- J. Kagan, & R. B. Zajonc (Eds.), *Emotions, cognition, and behavior* (pp. 103-131). Cambridge, MA: Cambridge University Press.
- Hoffman, M. L. (1987). The contribution of empathy to justice and moral judgment. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 47-80). Cambridge, MA: Cambridge University Press.
- Hopkins, R., & Fletcher, J. E. (1994). Electrodermal measurement: Particularly effective for forecasting message influence on sales appeal. In A. Lang (Eds.), *Measuring psychological responses to media messages* (pp. 113-132). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Houston, D. A. (1990). Empathy and the self: Cognitive and emotional influences on the evaluation of negative affect in others. *Journal of Personality and Social Psychology*, 59(5), 859-868.
- Howard, D. J., & Gengler, C. (2001). Emotional contagion effects on product attitudes. *Journal of Consumer Research*, 28, 189-201. doi: 10.1086/322897
- Iyer, A., & Oldmeadow, J. (2006). Picture this: Emotional and political responses to photographs of the Kenneth Bigley kidnapping. *European Journal of Social Psychology*, 36, 635-647. doi: 10.1002/ejsp.316
- Joffe, H. (2008). The power of visual material: Persuasion, emotion and identification. *Diogenes*, 217, 84-93. doi: 10.1177/0392192107087919

Kononova, A., Bailey, R. L., Bolls, P. D., Yegiyan, N. S., & Jeong, J. (2009, May).

Extremely sensational, relatively close: Cognitive and emotional processing of domestic and foreign sensational television news about natural disasters and accidents. Paper presented at the annual meeting of the International Communication Association, Chicago, IL.

Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of Communication*, 50(1), 46–70.

Lang, A., & Newhagen, J. (1996). Negative video as structure: Emotion, attention, capacity and memory. *Journal of Broadcasting & Electronic Media*, 40(4), 460-477.

Lang, A., Zhou, S., Schwartz, N., Bolls, P. D., & Potter, R. F. (2000). The effects of edits on arousal, attention and memory for television messages: When an edit is an edit can an edit be too much? *Journal of Broadcasting and Electronic Media*, 44(1), 94-109.

Lanzetta, J. T., Cartwright-Smith, J., Kleck, R. E. (1976). Effects of nonverbal dissimulation on emotional experience and autonomic arousal. *Journal of Personality and Social Psychology*, 33(3), 354-370.

Levine, M., & Thompson, K. (2004). Identity, place, and bystander intervention: Social categories and helping after natural disasters. *Journal of Social Psychology*, 144,

229-245. doi: 10.3200/SOCP.144.3.229-245

- Loewenstein, G., & Small, D. A. (2007). The scarecrow and the tin man: The vicissitudes of human sympathy and caring. *Review of General Psychology*, 11(2), 112-126.
- Lombard, M. (1995). Direct responses to people on the screen: Television and personal space. *Communication Research*, 22(3), 288-324.
- Lombard, M., & Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of Computer Mediated Communication*. Retrieved from <http://jcmc.indiana.edu/vol3/issue2/lombard.html>
- Lundqvist, L. (1995). Facial EMG reactions to facial expressions: A case of facial emotional contagion? *Scandinavian Journal of Psychology*, 36(2), 130-141.
- Matsumoto, D. (1987). The role of facial response in the experience of emotion: More methodological problems and a meta-analysis. *Journal of Personality and Social Psychology*, 52(4), 769-774.
- Matsumoto, D. (1989). Face, culture and judgments of anger and fear: Do the eyes have it? *Journal of Nonverbal Behavior*, 13, 171-188. doi: 10.1007/BF00987 048
- McCarty, K. D. (1989). The gospel of wealth: American giving in theory and practice. In R. Magat (Eds.), *Philanthropic giving: Studies in varieties and goals* (pp. 46-62). New York, NY: Oxford University Press.

- McCaul, K. D., Holmes, D. S., & Solomon, S. (1982). Voluntary expressive changes and emotion. *Journal of Personality and Social Psychology*, 42(1), 145-152.
- McHugo, G. J., Lanzetta, J. T., Sullivan, D. G., Masters, R. D., & Englis, B. G. (1985). Emotional reactions to a political leader's expressive displays. *Journal of Personality and Social Psychology*, 49(6), 1513-1529.
- Meltzoff, A. N., & Moore, M. K. (1977, October). Imitations of facial and manual gestures by human neonates. *Science*, 198, 74-78. doi: 10.1126/science.897 687
- Mertens, L., Siegmund, H., & Grusser, O. J. (1993). Gaze motor asymmetries in the perception of faces during a memory task. *Neurophysiologia*, 31, 989-998. doi: 10.1016/0028-3932(93)90154-R
- Meyrowitz, J. (1985). *No sense of place*. New York, NJ: Oxford University Press.
- Middlemist, R. D., Knowles, E. S., & Matter, C. F. (1976). Personal space invasions in the lavatory: Suggestive evidence for arousal. *Journal of Personality and Social Psychology*, 33(5), 541-546.
- Milgram, S. (1974). *Obedience to authority: An experimental view*. New York, NJ: Harper & Row.
- Muhlberger, P. (2005, September). *Attitude change in face-to-face and online political*

deliberation: Conformity, information or perspective taking. Paper presented at the annual meeting of the American Political Science Association, Washington DC.

- Mutz, D. C. (2002) Cross-cutting social networks: Testing democratic theory in practice. *American Political Science Review*, 96, 111-126. doi: 10.1017/S0003055402004264
- Mutz, D. C. (2007). Effects of “in-your-face” television discourse on perceptions of a legitimate opposition. *American Political Science Review*, 101, 621-635. doi: 10.1017/S000305540707044X
- Mutz, D. C., & Nir, L. (in press). Not necessarily the news: Does fictional television influence real-world policy preferences? *Mass Communication & Society*.
- Neumann, R., & Strack, F. (2002). “Mood contagion”: The automatic transfer of mood between persons. *Journal of Personality and Social Psychology*, 79(2), 211-223.
- Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice Hall.
- O’Keefe, D. J. (2003). Message properties, mediating states, and manipulation checks: Claims, evidence and data analysis in experimental persuasive message effects research. *Communication Theory*, 13(3), 251-274.
- Olson, G. (2008, July). We empathize, therefore we are: Toward a moral neuropolitics.

ZNet. Retrieved from <http://www.zcommunications.org/znet/viewarticle /16246>

Omdahl, B. L. (1995). *Cognitive appraisal, emotion and empathy*. Mahwah, NJ:

Lawrence Erlbaum Associates.

Persson, P. (1998). Towards a psychological theory of close-ups: Experiencing intimacy and threat. *KINEMA. A Journal for Film and Audiovisual Media* (Spring), 24-42.

Retrieve from <http://www.kinema.uwaterloo.ca/article.php?id=241&feature>

Reeves, B. (1993). The face of interest. *Motivation and Emotion*, 17, 353-375. doi: 10.1007/BF00992325

Reeves, B., Lang, A., Kim, E. Y., & Tatar, D. (1999). The effects of screen size and message content on attention and arousal. *Media Psychology*, 1(1), 49-67.

Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television and new media like real people and places*. New York, NJ: Cambridge University Press.

Richardson, D. R., Geen, L. R., & Lago, T. (1998). The relationship between perspective-taking and nonaggressive responding in the face of an attack. *Journal of Personality*, 66, 235-256. doi: 10.1111/1467-6494.t01-1-00011

Rushton, J. P., Russell, R. J. H., & Wells, P. A. (1984). Genetic similarity theory: Beyond kin selection. *Behavior Genetics*, 14(3), 179-193.

Schachter, S., & Singer, J. E. (1962). Cognitive, social and physiological determinants

of emotional state. *Psychological review*, 69(5), 379-399.

Schiffenbauer, A., & Schiavo, R. S. (1975). Physical distance and attraction: An intensification effect. *Journal of Experimental Social Psychology*, 12(3), 274-282.

Schmidt, G., & Weiner, B. (1988). An attribution-affect-action theory of behavior: Replications of judgments of help-giving. *Personality and Social Psychology Bulletin*, 14, 610-621. doi: 10.1177/0146167288143021

Sevillano, V., Aragonés, J. I., & Schultz, P. W. (2007). Perspective taking, environmental concern, and the moderating role of dispositional empathy. *Environment and Behavior*, 39(5), 685-705.

Simon, A. F. (1997). Television news and international earthquake relief. *Journal of Communication*, 47(3), 82-93.

Small, D. A., & Verrochi, N. M. (2009). The face of need: Facial emotion expression on charity advertisements. *Journal of Marketing Research*, 46, 777-787. doi: 10.1509/jmkr.46.6.777

Smith, R. J., & Knowles, E. S. (1979). Affective and cognitive mediators of reactions to spatial invasions. *Journal of Experimental Social Psychology*, 15(5), 437-452.

Smither, S. (1977). A reconsideration of the developmental study of empathy. *Human Development*, 20(5), 253-276.

- Snedecor, G. W., & Cochran, W. G. (1989). *Statistical Methods* (8th ed.). Ames, IA: Iowa State University Press.
- Steenbergen, M. R. (1995). Compassion and American public opinion: An analysis of the NES humanitarianism scale. Retrieve from <ftp://ftp.electionstudies.org/ftp/nes/bibliography/documents/nes008177.pdf>
- Stocks, E. L., Lishner, D. A., & Decker, S. K. (2009). Altruism or psychological escape: Why does empathy promote prosocial behavior? *European Journal of Social Psychology*, 39, 649-665. doi: 10.1002/ejsp.561
- Storms, M. D., & Thomas, G. C. (1977). Reactions to physical closeness. *Journal of Personality and Social Psychology*, 35(6), 412-428.
- Strack, F., Martin, L. L., & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology*, 54(5), 768-777.
- Sturmer, S., Snyder, M., Kropp, A., & Siem, B. (2006). Empathy-motivated helping: The moderating role of group membership. *Personality and Social Psychology Bulletin*, 32, 943-956. doi: 10.1177/0146167206287363
- Taylor, S. E., & Thompson, S. C. (1982). Stalking the elusive “vividness” effect. *Psychological Review*, 89(2), 155-181.
- Toi, M., & Batson, C. D. (1982). More evidence that empathy is a source of altruistic

- motivation. *Journal of Personality and Social Psychology*, 43(2), 281-292.
- Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review*, 110, 403-421. doi: 10.1037/0033-295X.110.3.403
- Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation and behavior. *Journal of Consumer Psychology*, 17(2), 83-95.
- Trout, J. D. (2008). *The empathy gap: Building the bridges to the good life and the good society*. New York, NY: The Penguin Group.
- Vaughan, K. B., & Lanzetta, J. T. (1980). Vicarious instigation and conditioning of facial expressive and autonomic responses to a model's expressive display of pain. *Journal of Personality and Social Psychology*, 38(6), 909-923.
- Weiner, B. (1980). A cognitive (attribution)-emotion-action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology*, 39(2), 186-200.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35(2), 151-175.
- Zajonc, R. B., Murphy, S. T., Inglehart, M. (1989). Feeling and facial efference: Implications of the vascular theory of emotion. *Psychological Review*, 96(3), 395-416.

Zillmann, D. (2006). Empathy: Affective reactivity to other's emotional experiences.

In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 151–182).

New York, NY: Lawrence Erlbaum Associates.

Zillmann, D., & Brosius, H. B. (2000). *Exemplification in communication: The*

influence of case reports on the perception of issues. Mahwah, NJ: Lawrence

Erlbaum Associates.

Zillmann, D., Gibson, R., & Sargent, S. L., (1999). Effects of photos in news-magazine

reports on issue perception. *Media Psychology*, 1(3), 207-228.

Zuckerman, M., Klorman, R., Larrance, D. T., & Spiegel, N. H. (1981). Facial,

autonomic, and subjective components of emotion: The facial feedback

hypothesis versus the externalizer-internalizer distinction. *Journal of Personality*

and Social Psychology, 41(5), 929-944.